THE EFFECTS OF INSTRUCTIONAL PLACEMENT OF UNMOTIVATED/UNSUCCESSFUL NINTH-GRADE STUDENTS IN A MAGNET-SITE ALTERNATIVE EDUCATION PROGRAM

By

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The purpose of this study was to determine the effect of a magnet-site alternative education program on school performance of unmotivated/unsuccessful ninth-grade students. The study measured school attendance, credits earned, grade promotion, dropout rate, and graduation rate. Students served by the alternative education program were compared to two control groups: one self-identified and one randomly selected. This was a longitudinal study, measuring performance of students in the 1991-92 ninth-grade class for a period of four years.

The sample for this study was drawn from one Florida school district with an enrollment of 25,000 students. Analyses were run on 96 students: 30 in the treatment program, 32 in the self-identified control group, and 34 in the randomly selected control group. An analysis of covariance (ANCOVA) was used to generate the statistics to determine whether significant differences in outcome variables existed between students in the alternative program and students in the two control groups.

Analysis of the data indicated that participation in the magnet-site alternative education program was not associated with improved performance in school. Significant differences were found in school attendance, credits earned, grade promotion, and dropout rate between the treatment group and the randomly selected control group. Significant differences were found in credits earned and grade promotion between the treatment group and the self-identified control group. In all measures, the control group achieved higher performance. Graduation rate was not significantly different among the groups.

CHAPTER 1
INTRODUCTION

Every year we lose approximately one million students in our schools through dropouts (Rowland & Snow, 1994; Shippee, 1992). Unprepared to find and hold jobs and dependent on others for subsistence, many of these young people move from discouragement to frustration to alienation. Some turn to crime. All risk failure as parents, as workers, and as citizens. And society has to pay the consequences (Ogletree, 1990).

In an average school system in the United States more than one-quarter of the students will leave high school before graduation (Jensen & Strauser, 1994; Morris, 1994; Roderick, 1993). High school dropouts are more likely to be unemployed, employed in jobs they find undesirable, or incarcerated (Washington, 1994). The national costs of the dropouts from one class is $229 billion in lost earnings (Catterall, 1987a).

Given changes in the nation's economy and the changing demographics and requirements of the workforce, the United States cannot afford undereducated and nonproductive workers. It cannot afford large segments of the work-age population to be dependent on a social system of welfare whose base of contributors is diminishing, as fewer Americans are born and more Americans are reaching the age of retirement (Parrish, 1991). The dropout rate is an economic as well as educational problem in which a growing number of youths are out of school and out of work, and have no skills to obtain or maintain a job (Parrish, 1991). The United States of the 1990s must focus attention on students who are at risk of dropping out of school before completing their high school educations (Morris, 1992).

The costs to society of high school dropouts are high both in terms of dollars and social problems. Dropouts are more frequently unemployed, lifetime earnings are lower, dropouts are six to ten times more likely to be involved in crime, 85 percent of state prison inmates are dropouts, dropouts pay less taxes and are more often on welfare, dropouts have fewer employment opportunities, and they experience less sense of worth and personal satisfaction (Florida Department of Education, 1988).

The nation's economic stability and workforce quality are directly related to the effectiveness of schools in succeeding with all students (Washington, 1994). "While education, more than any other enterprise, will determine the well-being of the nation and its place in the 21st century, of equal importance is the impact on the individual" (Furth, 1989).

> It behooves us all to make sure that each child in America has a good education and access to a good job. We cannot, as a nation, afford to throw any child away; we need them all to become successful adults if the economy, the community, the workforce, the military--indeed, the nation--is to survive. (Hodgkinson, 1991, p. 12).

The dropout rate decreased throughout this century until the mid 1960s early 1970s. At the beginning of the century less than 10% of students graduated from high school (Tyack, 1974; Wittlebols & Triplett, 1986); it wasn't until the early 1950s that the dropout rate fell below 50% (Titone, 1986). Between 1965 and 1975 the dropout rate reached its lowest point of 22% (Institute for Educational Leadership, 1986; Wittlebols & Triplett, 1986) and has been reported as 25% or higher in the educational literature of the 1980s and 1990s (Goodlad, 1984; Guthrie, 1989; Jensen & Strauser, 1994; Morris, 1994; Peng, 1985). A dropout rate of 25% was once a figure of which to be proud--among the best in the world. Today, however, 25% is seen as a serious problem (Finn, 1991). Projected demographic trends show an increasing number of children who are at risk of dropping out, thus predicting even higher dropout rates for the future (Furth, 1989). "The substantial dropout rate of pupils is one of the most difficult problems that faces any country. Yet this difficulty continues to exist" (George, Land, & Hickson, 1992, p. 36).

Students who are over-age for grade are at the highest risk of dropping out of school (Roderick, 1993; Sklarz, 1989). Being retained once increases a student's chance of dropping out 40 to 50 percent; being retained twice increases the chance by 90 percent (Wheelock, 1986). Ninth-grade students have a high retention rate because of high failure rate of courses. The ninth grade is also a point in schooling where many students choose to dropout (Florida Department of Education, 1987). Dropouts create social and financial pressures on the community and fail to reach high personal potential. However, they can be identified early, and they must be better educated before leaving school if this country is to continue enjoying its standard of living and means of governance (Hodgkinson, 1991).

Democracies depend on public schools for the education of active citizens through equal access to a free, high-quality public education (Association for Supervision and Curriculum Development, 1996). "A democratic society repudiates the principle of external authority . . . {and breaks down the} barriers of class, race, and national territory. This can only be created by education" (Dewey, 1916, p. 87). "The democratic criterion requires us to develop the capacity of every student to the point of competence that they can choose their own career" (p. 119).

Just as there is no single cause for dropping out of school, no single solution exists for retaining all students in the educational system (McLaughlin, 1990). Different programs should be designed to serve different groups of at-risk students, based on their area of difficulty succeeding in school. One of the major types of programs needed to serve potential dropouts should be "directed toward students who perform poorly because they are dissatisfied with the school environment" (Ekstrom, Goertz, Pollack, & Rock, 1986, p. 374).

To change the educational process that has failed these students in the traditional high schools, some alternative strategies must be developed. The definition of alternative schools differs among educators. Some definitions of alternative schools violate what others hold most central. "For instance, in some parts of the country 'alternatives' are programs synonymous with in-school suspension programs--while in others, the idea of entrance by choice is perhaps the single most important ingredient" (Raywid, 1982). The term "alternative school" has been also used to describe punitive programs. In fact, in a survey conducted by Raywid, one-half of the respondents had established alternative schools in response to discipline problems.

> An alternative school that is physically separated from the traditional school can remove the student from a school environment that he or she has associated with failure. Beginning a new milieu might be an important first step toward completing school. (p. 11)

The whole world is demanding excellence in education, and, with the clear evidence that magnet schools are an extremely promising route to "Effective Schools," magnet schools can provide the vehicle for achieving excellence. However, magnets tend to concentrate their resources on programs for the fortunate youngster, i.e. "Gifted and Talented," "Performing Arts," or "Math and Science" (Raywid, 1987). If this country is to:

> produce a generation of excellence, and not just a well-schooled elite, then a much broader focus is necessary in designing magnet schools. The challenge is not simply a matter of creating conditions that enable the ablest to succeed; it is rather, . . . eliciting extraordinary performance from ordinary people. (p. 16)

Alternative education programs designed to improve student performance and conducted in traditional schools have proven ineffective. A study conducted in Florida (Martula, 1987) implemented a program with four strategies to assist at-risk students: group counseling, tutoring, career awareness, and parent involvement. No significant differences were found among the experimental and control groups on any of the six variables tested: dropouts, absences, reading, mathematics, subject failures, disciplinary referrals, or attitude toward school. A study of three dropout programs in one Detroit high school found no significant difference in number of absences, credits earned, or grades (Jenifer, 1995).

Catterall (1987b) reported in the American Research Journal about his study conducted in a high school with an alternative program based on intensive counseling. The study, which found no significant differences in student performance compared the treatment group with two control groups: one self-identified and one randomly selected. Phillips, Howard, McKinley, & Bowden (1994) reported on a study of a magnet-site program in Georgia that was designed with the three groups of students as in the Catterall study. They could not construct the randomly selected group, but did find a difference in the dropout rate in a one-year period between students in the program and the self-identified group. The study conducted in this dissertation replicated the general design of Catterall's study with three major differences: (a) the program is a comprehensive, multifaceted design; (b) it is located away from the traditional high schools on a magnet site; and (c) it is a longitudinal study, covering the four years considered normal completion time for high school.

Statement of the Problem

Educators recognize the problem of students leaving high school prior to graduation, and prior to gaining the skills necessary to fully participate in society. The educational literature contains many entries addressing the dropout problem. States have provided additional funding to school districts to encourage the development and implementation of alternative programs to meet the needs of these students. Yet, the dropout problem remains.

School districts throughout the United States have implemented specially designed programs to serve at-risk students. Research has been attempted on only a few of these alternative programs, and many studies have shown no significant difference in student performance. However, in most of the programs researched students received the special services within the traditional school setting. "Additional research effort is needed in conducting systematic evaluations of dropout prevention and recovery programs" (Rumberger, 1987, p. 119).

Purpose of the Study

The purpose of this study is to determine if placement of unmotivated/unsuccessful ninth-grade students in a magnet-site program improves school attendance, credits earned, grade promotion, dropout rate, and graduation rate. Specifically, this study addressed the following questions:

1. Is there a difference in school attendance of unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

2. Is there a difference in credits earned between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

3. Is there a difference in grade promotion between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

4. Is there a difference in dropout rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

5. Is there a difference in graduation rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

Importance of the Study

Student behaviors do not occur in a vacuum; the context for these behaviors also must be understood. Researchers must look at school organization and describe its impact on students (Baker & Sansone, 1990). Studies evaluating solutions to the dropout problem are critical to the future success of the American economy (Catterall & Stern, 1986; Parrish, 1991; Phillips et al., 1994). Identifying programs and practices that are successful in responding to the needs of at-risk students is an important task for educators (Brodinsky & Keough, 1989). A variety of successful programs must be developed to help potential dropouts succeed in school and to earn a high school diploma (Jackson, 1994).

Much research has focused solely on the profiles of the dropout student population and the costs and consequences of dropping out (McPartland, 1994). "But these findings do not suggest how schools can most effectively act to prevent students from leaving and may even inhibit such action by suggesting that the basic causes are beyond schools' control" Catterall, 1986, p. 78). Researchers should move from descriptive case studies and shift their attention to in-depth and detailed examination of the effects of school practices on at-risk students. Studies with control groups, comparing the performance of students in alternative programs with students in traditional high school programs, are needed to provide evidence that there are workable solutions (Dougherty, 1989; McPartland, 1994). Research must also be conducted over a longer time period than the one year that has been the norm for studies in dropout prevention. "Much of the inability of research to inform school policy has stemmed from the lack of longitudinal data" (Roderick, 1993).

Definition of Terms

The following definitions were used in this study:

An alternative program is a non-traditional instructional program designed to meet the needs of an identified group of students who are experiencing problems achieving success in traditional schools (Raywid, 1982).

An at-risk student is a student who, based on certain identified characteristics and performance, is believed to have a very low chance of graduating from high school (Frazer & Wilkinson, 1990; Greene, 1986; Underwood, 1989; Koeninger, 1995).

The attrition rate is the percentage of students leaving school calculated by subtracting the graduation rate from 100% (Rumberger, 1988).

A dropout is "a student who leaves school for any reason except death before graduation or completion of a program of studies without transferring to another public or private school or other educational institution" (Florida Statutes, Section 228.041).

The dropout rate is the proportion within a single group of students who do not complete high school. This method of calculation is known as the cohort rate (Burkham & Lee, 1990).

The graduation rate is the comparison of the number of entering ninth graders with the number of graduating seniors four years later, expressed as a percentage (Florida Department of Education, 1987).

A magnet program is an instructional program offering a differentiated curriculum, voluntary attendance, and open enrollment to all students within a school district (Blank, 1984).

A magnet-site program is an instructional program offering a differentiated curriculum, voluntary attendance, and open enrollment to all students within a school district, located on a campus separate from traditional high schools.

Grade promotion is the progression of a student to the next grade level based on the number of credits earned qualifying the student for that status.

Retention is the failure on the part of a student to earn a sufficient number of credits to mathematically progress toward graduation in four years and, thereby, failing to gain status of the next grade level.

Unmotivated/unsuccessful students are one category of students to be served by dropout prevention programs as described in Florida State Board of Education Administrative Rules, Chapter 6A-6.0524.

Limitations and Delimitations

This study had three major limitations:

1. The scope of the study was limited to a sampling of 1991-1992 ninth-grade students from one school district in central Florida with an enrollment of approximately 25,000 students.

2. Students in the treatment group were not randomly selected. Students had to indicate an interest in enrolling in the program, which provided an additional indicator of dropout potential--a self-professed prediction that they would not be able to complete high school in a traditional setting.

3. Grades, one of the strongest factors in predicting at-risk students, and the most common measure of student performance, could not be used as a variable due to lack of control created by students being assigned to many different teachers and attending different schools.

This study had one limitation: the program served only one category of at-risk students, the unmotivated/ unsuccessful. The other categories served by dropout prevention programs in Florida are: (a) teenage parenting students, (b) students with a documented substance abuse problem, (c) students committed to Health and Rehabilitation Services and other community agency programs, (d) students with severe discipline problems, and (e) students who return to school after having dropped out (Florida State Board of Education, 1991).

Organization of Dissertation

Chapter 1, the introduction to the study, includes an overview of the problem created by students dropping out of school and the need for solutions, statement of the problem, purpose of the study, importance of the study, definition of terms, and limitations.

Chapter 2 contains a review of the research and literature relating to high school dropouts. It includes an overview of the problem, employment and workforce issues, economic and social costs, changing demographics, equality of educational opportunity, school holding power, dropout rate calculations, dropout rate, dropout indicators, ninth-grade students most at risk, alternative schools and magnet programs, elements of successful alternative schools, need for this study, and a summary.

Chapter 3 contains a description of the study design. Structure and design of the program are detailed, research design is explained, research questions are restated as null hypotheses, population and sampling procedures are described, data collection procedures are explained, and statistical procedures are detailed.

Chapter 4 contains the results of the statistical tests.

Chapter 5 contains a summary of the study. Principal findings, conclusions, and recommendations are discussed.

CHAPTER 2
REVIEW OF THE RESEARCH

> In the 1950s, the dropout rate approached 50 percent. But in those days, society was not as concerned about this problem as it is today. Most of these young people left school and entered the labor force fairly successfully, finding jobs that provided a good wage. Our industrial economy needed lots of workers with strong bodies, common sense, a willingness to work, and not much more than an eighth grade education. But advanced technology and international competition have changed all that. Computers, robots, quality circles, fewer layers of management, and intense competition have all conspired to drastically change the nature of the factory floor. (Brodinsky & Keough, 1989, p. 19)

Only recently has dropping out of high school been defined as a problem in our educational history. In fact, in the early part of this century, students were actually encouraged to drop out. In Van Denburg's book, Causes of the Elimination of Students in Public Secondary Schools of New York City (1911), he argues that if potential dropouts could be identified in the ninth grade, they should be eliminated from the schools to save the city money. Admittedly undemocratic, but an effective cost-saving measure. Since the purpose of high school was graduation, eliminating those who would not graduate would not effect the school negatively.

Most current literature on the subject takes a different view. Blinde and Chan (1984) summarized the effects of dropping out of high school in a negative manner:

> It is well documented that dropping out of high school is associated with an array of individual and social costs. For the individual, failure to complete high school is associated with limited occupational and economic prospects, disenfranchisement from society and its institutions, and substantial loss of personal income over his or her lifetime. For society, premature school-leaving is associated with increased expenditures for government assistance to individuals and families, high rates of crime, and the maintenance of costly special programs for purposes of employment and training. (p. 113)

As the United States moves into the 1990s and into the 21st century, one of the major issues that will have to be addressed by the education community is how to serve the growing numbers of at-risk students who are unable to succeed in the traditional system (Sarkees-Wircenski, 1991).

Employment and Workforce Issues

A circumstance that brings dropout issues to national prominence is the growing concern of the quality of the American labor force and the ability of American corporations to compete successfully with foreign companies both at home and abroad (Catterall, 1986). At a time when the job market requires a more highly educated workforce, the high school dropout rate creates an ever-widening gap between job markets and the academic skills of employees (Phillips et al., 1994). Lester Thurow states in his book, Head To Head: The Coming Economic Battle Among Japan, Europe, and America (1992), "in the twenty-first century, the education and skills of the workforce will end up being the dominate competitive weapon" (p. 40). "America can no longer afford the luxury of educating only a portion of its young. We need an educated and skilled workforce if we are going to continue to compete internationally" (Guthrie, 1989, p. 1).

Historically, America has had a surplus of young people. As a result, our economy could function effectively even if a proportion of youngsters were shunted aside into unproductive lives. Now, and for the foreseeable future, there is a surplus of old people and a concomitant shortage of young people (Parrish, 1991). It is imperative that educators in the United States find mechanisms to help all students prepare for productive lives. "As long as one student drops out of school each day, our nation's economic future is at risk" (Washington, 1994, p. 220).

> In Japan, where all but 7% of students complete high school, dropouts are given specific help immediately after leaving school so they can become productive members of the workforce. In West Germany, dropouts fit into an apprenticeship system that provides positive work experience and leads to certification as skilled labor. In the United States, dropouts fill the welfare rolls and jails; they wander the city streets; they cost society billions of dollars in social service funds, vandalism and crime, and wasted human resources, and lost tax revenues. (Institute for Educational Leadership, 1986, p. 1)

Today it is widely assumed that graduation from high school constitutes completion of the common school. Earlier in this century the design of the common school was to educate all children commonly until they were ready for the workforce or higher education. This level was typically assumed to be reached by the end of the eighth grade. At this point, the majority of students entered the workforce and a minority continued on to high school (Goodlad, 1984).

In today's job market the high school diploma is critical. High school graduates' monthly earnings are more than twice those of dropouts. And, most future jobs will require postsecondary education, which will be unavailable to the dropout (Hull & Parnell, 1991). The new jobs are substantially different. By the year 2000, new jobs will require a median level of education of 13.5 years. This means our youth will need some college training just to obtain a job (Mirochnik & McCaul, 1990; Morris, 1992). The relative economic disadvantage of dropping out of high school could be even greater in the future because technology is altering job skill requirements. Without a sound, basic education, dropouts will be less likely to adapt to a changing work environment and will therefore become even less employable (Eubanks, 1995).

The number of unskilled jobs is decreasing. In 1950, 65% of the jobs were classified unskilled. That figure is projected to drop to 15% by the year 2000 (Brustein & Mahler, 1994). In most First World workplaces, more and more different skills are now required to become employable and the number of unskilled and semi-skilled positions have greatly declined. The future for those who elect not to complete high school is bleak (George et al., 1992).

Economic and Social Costs

The costs of dropping out of high school are discernable, substantial, and growing (Catterall, 1987a). The dropout is a more frequent recipient of welfare and unemployment subsidies. More than 50% of all families on Aid to Families with Dependent Children are headed by a high school dropout (Hahn, Danzberger, & Lefkowitz, 1987). Attending a public high school and graduating is one of three factors that will ensure permanent escape from poverty. The other two are finding a job and retaining it and avoiding out-of-wedlock births (Murray & Laren, 1986).

Dropouts are more likely to engage in criminal activity, resulting in higher costs of public judicial and penal services. More than 80% of America's prisoners are high school dropouts. Each prisoner costs the taxpayers more than $20,000 per year--more than another tax-supported individual. "In Pennsylvania it is seven times more expensive for taxpayers to maintain someone in the state pen than it is to maintain someone in Penn State" (Hodgkinson, 1991, p. 14).

The value of education has been calculated on an individual basis through statistics relating education to the costs of nonproductivity. "For each individual that does not graduate from high school, the total costs of prison, parole, and welfare over his or her adult lifetime average about $69,000. The costs drop to $32,000 for each high school graduate" (Lewis, 1996, p. 460).

Projected total earnings loss to society for the high school class of 1981 due to dropping out of school is $229.3 billion in lifetime earnings and $68.8 billion in lost tax revenue (Catterall, 1987a). Catterall stated that some believe his calculations to be high, but at even a quarter of the projected amount, the magnitude remains substantial. "The national costs of keeping students in school can scarcely approach the cost to the nation of dropping out" (McDill, 1986).

High school dropouts have less chance in finding employment than prison releasees (Castor, 1991). One in four 16- to 24-year-old dropouts were unemployed in 1985 compared to one in 10 high school graduates who were not enrolled in postsecondary education (General Accounting Office, 1986). "Those with fewer than twelve years of schooling comprise a large part of the long-term unemployed" (Pallas, 1987).

Dropping out of high school has become an increasingly costly decision to the individual. High school dropouts have traditionally earned less that graduates. The current labor market has increased this disadvantage due to a two-decade-long decline in the relative economic position of lower-skilled workers, a decline that accelerated in the 1980s (Roderick, 1993). "It is still the case that educational attainment is the single best predictor of adult occupational success" (Braddock, 1981, p. 490). "While graduating from high school does not insure that a person has sufficient academic skills for successful employment, failing to graduate usually insures that a person does not" (Rumberger, 1986, p. 10).

Americans, who hold deep-seated beliefs in the value of education, have come to consider the completion of high school to be the barest of minimum preparation for adult life (Catterall, 1986). "We must, as a total society, meet this challenge if our national economy is to remain competitive and if we are to prevent social and economic polarization of America's population into 'have and have nots'" (Hahn et al., 1987, p. vi). Glasser's view of the societal impact of students not succeeding, stated in

Schools Without Failure (1969), unfortunately still holds true today:

> We will have more social disturbances, more people who will need to be kept in jails, prisons, and more mental hospitals, more people who need social workers to take care of their lives because they feel they cannot succeed in this society and are no longer willing to try. (p. 6)

Changing Demographics

Changing demographics in the United States are creating an even larger pool of at-risk youngsters. More children are entering school from impoverished and single-parent households. Percentages of children from minority backgrounds and those having teenage mothers are increasing. All of these factors have been linked to students with a high probability of dropping out of school. Fewer students enjoy the traditional home of a working father and a housewife mother. In 1955, 60% of households were so described; by 1985, that described only 7% (Hodgkinson, 1985).

Age demographics are changing also. Our society is aging rapidly, which makes the country more economically dependent on a smaller, and more largely disadvantaged and minority, youth population. "In 1950, seventeen workers paid the social security benefits for each retiree. By 1992, only three workers will provide the funds for each retiree" (Institute for Educational Leadership, 1986, p.2).

A society that allows youth to leave school early does so at its own peril.

Florida has a high potential for dropouts because of its peculiar distribution of income that creates many at-risk youngsters. More than 30% are in poverty--one of the highest figures in the nation. Florida's boom of the 1880s brought the rich and their servants on Flagler's and Plant's railroads. Today, the middle class is still missing.

Two of Florida's largest industries, agriculture and tourism, have wages so low that per-capita income suffers. "The income averages in Florida are very misleading . . . if you average high and low incomes, you get middle income numbers, but they don't mean much" (Hodgkinson, 1988, p. 1). "It could be argued that half of all the children added to Florida's population are at risk of failure, socially, educationally, and occupationally" (p. 2).

Equality of Educational Opportunity

> Conventional wisdom suggests that it is our free public school systems that guarantee an open society in which children of all social classes and ethnic backgrounds have an equal chance to develop their talents and achieve adult success commensurate with their individual abilities. (Braddock, 1981, p. 490)

One problem in meeting the needs of at-risk students is that all educators do not hold the belief that schools can, or should, serve the educational needs of all students. The chairman of the Boston school board put the matter more succinctly: "We do not have inferior schools: we have been getting an inferior type of student." The problem lies in the child, not in the educational or social system (Tyack, 1974). Most young people at risk will be what some describe as the undeserving poor and not worthy of the attention or the finances of the schools (Mann, 1986).

Bachman, Green, and Wirtanen (1972) wrote that dropping out was just a symptom of problems students had before leaving school--low self-esteem, aspirations, and accomplishments--and that there was little evidence that dropping out makes matters worse. Their research led them to believe that the dropout was a just a "'loser,' but he was a 'loser' long before he dropped out" (p. 3). The solutions: end high school at the 10th grade to allow more to graduate and stop the "anti-dropout campaign . . . {which} is giving dropouts a bad name" (Bachman, 1972, p. 29).

The development of the free, public school system was a result of the political and economic upheaval of the masses. "It has destroyed the idea that learning is properly a monopoly of the few who are predestined by nature to govern social affairs. But the revolution is still not complete" (Dewey, 1916, p. 257). Eight decades later, the problem of students leaving school without the skills required to succeed in society indicates that the revolution is still not complete.

> It is perhaps unfair to expect schools to be the sole engine for social reform; perhaps Dewey's faith in education was overly optimistic. Although schools can be a powerful agency for social reform, the failure of American education for at-risk students is an indictment of American democracy at large, not only its schools. How can this at-risk population be 'helped' to adjust to schools? From a Deweyan perspective . . . the problem is not students but schools, and not only schools, but the larger social order in which they are imbedded. (Gerics & Westheimer, 1984, p.57)

In the 1990s, education literature still addresses the concern that the public school has "tended toward an elitist conception of its function, has emphasized its selective characteristics, and has at least partially abrogated its responsibility for . . . 75 to 80 percent of its students" (Hull & Parnell, 1991, p. 9). "Scant attention is given either to the needs of {at-risk} students or to their assets. They are viewed, when considered at all, as deviants from the mainstream of the school's student body" (Tyler, 1987, p. vii).

Some in America have described the purpose of the K-12 schools to serve a "sorting and selection function", where those who will go to college and those who will not are placed in separate tracks, done "in a manner that is negative and alienating to many students" (Wehlage & Rutter, 1986, p. 389). It has been said that there is an unwritten national policy of "teach the best and the hell with the rest" (Mann, 1986, p. 317). In traditional schools, marginal students are expected to fit the school organization. "The implied message is, 'If they can't or won't change themselves, they don't belong'" (Sinclair & Ghory, 1987, p. 61). "The school all too frequently heaves a sigh of relief rather than feels a sense of failure when a 16-year-old youngster decides to dropout" (Howe, 1984, p. 80). Some argue there may be more force-outs from high school than there are dropouts.

> In 1982-1983 a series of reports on secondary education in the United States were generally critical of education practices and demanded change. Most states and local school districts have responded with sweeping changes in high school graduation requirements. The net result has been a dramatic shift from comprehensive high school curriculum to a "one program fits all" approach. This singular program is very clearly a college preparatory curriculum. When viewed against the 1980 U. S. Census Bureau figure of less than 20% of the adult population having earned a baccalaureate degree, that college preparatory curriculum appears highly unrealistic. This one basic curriculum also ignores what is known of the range of academic intelligence. The curriculum reform measures have made the high school diploma even more difficult to obtain for youngsters with the greatest need. (Downing & Harrison, 1990, p. 68)

The states and, more specifically, their legislatures are moving to add more specifications to the subject matter requirements for high school graduation. "But these new requirements are designed to affect future enrollees in higher education--well below half of those students even anticipating college attendance--and not nearly the entire population of today's secondary schools" (Goodlad, 1984, p. 285). The actions of states seem to evidence Dewey's concern that learning may still be considered a monopoly of the few who are predestined by nature to govern social affairs.

Not all in this country, or even in the education community, hold the belief that all students must be educated and that schools should restructure to meet the needs of those who experience difficulty in traditional schools. Their rhetoric may be quieter, but their actions do not support the changes needed for at-risk students. Since the publication of A Nation at Risk in 1983, many reform proposals have been initiated, graduation standards increased, minimum standards for promotion instituted, and new teachers required to pass special examinations before they can teach. "But so far, there has been no change in high school graduation rates . . . or in other indicators of quality" (Hodgkinson, 1991, p. 10).

School Holding Power

Although schools are currently failing to meet the educational needs of one-quarter of American students, schools can and must help the potential dropout gain a level of education required for full participation in society. "Students don't drop out of school because they don't want to learn. They drop out because they are failing to learn"

(Hamby, 1989, p. 23). To help students who are now unsuccessful become successful and progress toward graduation, changes in schools will be required. "Students don't fail; institutions do" (Gerics & Westheimer, 1986, p. 57). "Unless we can provide schools where children . . . can succeed, we will do little to solve the major problems of our country" (Glasser, 1969, p. 6).

> Dropping out is the observable evidence that alienation in which one recognizes that school has rejected the person and the person reciprocates by rejecting the school. Schools then become the context in which many at-risk youth, even those who do not drop out, receive messages that contribute to a view of themselves as inadequate and unworthy of success in the mainstream of American life. These students may tend to bring to school characteristics and problems that make them less than ideal pupils, but schools are obligated to respond in a constructive way to all of America's youth. (Wehlage, 1987, pp. 214-215)

Most students who drop out of school have the intelligence necessary to graduate from high school and benefit from obtaining a high school diploma (Morris, 1992). Motsinger (1993) conducted a study of successful high school students, prison inmates, and dropouts enrolled in a GED program. All subjects were 17 to 19 years old. He found that the dropouts in the GED program and the prison inmates had abilities and personality traits similar to the high-achieving students. The difference was that the successful students found the school environment to be positive while the dropouts and inmates did not.

The highest concern that educators and the public should have about school is developing a concept of schooling that will be attractive enough to hold at-risk students, but effective enough to promote their learning and development (Howe, 1984; Wehlage et al., 1987a). "The quality of an educational institution must be judged on its holding power, not just on assessments of its graduates" (Goodlad, 1984, p. 285). "Schools can begin now with the more optimistic pedagogical assumption that nearly all children can learn, given appropriate support, corrective feedback, and time" (p. 165). "We have scarcely begun the task of providing universal education through the secondary school--that great experiment for which this country has been praised" (p. 166).

Dropout Rate Calculations

The dropout rate has been a major topic of concern in both educational literature and general public literature. Comparisons of dropout rates are often invalid because many different systems are used for calculation. "No one knows what the high school dropout rate really is in the United States. That is because there is no consensus definition of a high school dropout, nor is there a standard method for computing the dropout rate" (Rumberger, 1987, p. 103). "Rates are calculated differently and include different data" (Hammach, 1986, p. 337). "Because definitions of the dropout rate vary so much from one locale to the next, it is difficult to compare dropout rates across schools, districts, and states" (Pallas, 1986, p. 24).

Dropout rate is normally expressed as a mathematical percentage calculated by n/d, where the numerator (n) is the number of students classified as dropping out and the denominator (d) is the total number of students. Three factors influence the calculation: 1) the definition of a dropout and the accuracy of the data system to determine (n), 2) the group of students included in the baseline population (d), and 3) the time frame used--annual or a multi-year period (Morrow, 1986).

The National Center for Educational Statistics has defined three different rate calculation methods: the event dropout rate is the proportion of students who drop out in a single year without completing high school, the status dropout rate is the proportion of the population who have not completed high school at one point in time, and the cohort dropout rate is the proportion within a single group of students who have not completed high school. The method used will affect the reported statistic (McMillen, Kaufman, & Whitener, 1994).

Another often reported statistic is the graduation rate, which is the percentage of high school graduates compared to the number of 9th-grade students four years earlier (Pallas, 1986). The attrition rate is calculated by subtracting the graduation rate from 100% (Rumberger, 1988). These rates understate the dropout rate because they do not account for students who leave school prior to the ninth grade and overstate the rate because they do not account for students who graduate in a time period greater than four years.

Most states and school systems use the event dropout rate because it often produces single-digit numbers. The truer picture is portrayed by the cohort dropout rate, but institutions avoid the higher numbers of this more accurate measure (Hess & Greer, 1987; Lizon, Olson, Frazer, Garcia, & Cole, 1990). An event dropout rate of 15% will result in less than 50% of a class making it to graduation (Hahn et al., 1987). The Florida Department of Education reported a dropout rate of 2.57% for the school year 1985-1986 (Florida Department of Education, 1987). This is an event dropout rate calculated by dividing the number of students classified as dropping out of school by the total number of students enrolled in kindergarten through 12th grade. This statistic is obviously low and greatly understates the problem. A more accurate event rate would have been calculated by using the total high school enrollment as the population baseline.

The gathering of data and classifying of students can create erroneous calculations. In Chicago, students who leave school before graduation are grouped into 19 separate "leave codes," only one of which is counted as a dropout. "Among other categories are 'lost-not coming to school,' 'married,' and 'cannot adjust.' As a result, only a small number of school leavers are actually listed as dropouts" (Hahn et al., 1987, p. 10). Not all students who leave school are ever classified as dropouts.

Research into dropout rate calculation unveils some questionable practices. In districts where schools are funded on average daily membership (ADM) or average daily attendance (ADA), some administrators were found to have "ghost students" on the rolls or students absent more than 20 days who were "forgotten" to be discharged resulting in higher funding for the school. A study in Chicago of 121 students classified as "transferred to another school" found that 35% never enrolled and, therefore, should have been counted as dropouts (Hahn et al., 1987).

Political pressure and financial incentives can encourage malfeasance in reporting dropouts (Mirochnik & McCaul, 1990, p. 7). Pressures on school-based administrators can encourage assigning withdrawal codes to students who falsely report dropout rate. One school, reporting an "official dropout rate" of 1.9%, was calculated to have an actual dropout rate of 58.3% (Hammach, 1986). Not only are some practices in calculating dropout rate questionable, but in some cases the data are purposely misstated.

Dropout Rate

"Although the rate of high school completion has increased over the past century, this trend has reversed in the 1970s, and dropout rates began to rise" (Bryk & Thum, 1989, p. 353). "Although the dropout rate has been on the rise in recent years, viewed historically, it is relatively low today" (Wehlage & Rutter, 1986, p. 374). The problem is not the size of the dropout rate but rather its size in comparison with the educational needs of society.

In the 1910s, when only 10% of students completed high school, Van Denburg (1911) was completing research on potential dropouts so they could be eliminated from school as a cost-saving measure. Less than 10% of the jobs required such a high education. When the dropout rate dropped to 50% in 1950 (Reyes, 1989), 65% of the jobs were still unskilled (Brustein & Mahler, 1994). Dropout rate was not a concern. The problem developed when the dropout rate stopped its decline in the 1970s as the number of unskilled jobs kept declining. Today there are few unskilled jobs and a large number of students leaving school early without the academic and job skills needed to fully participate in the American economy (Washington, 1994).

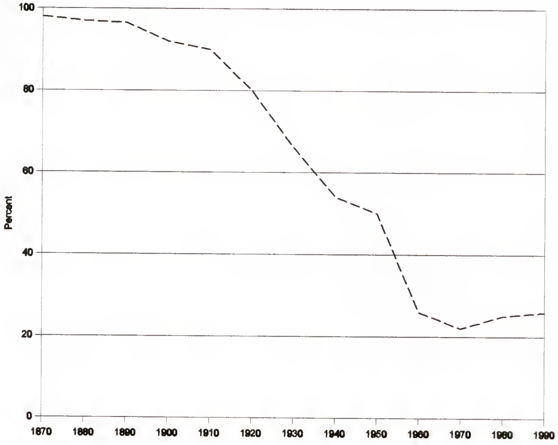
The historical dropout rate in the United States is depicted graphically in Figure 1. The decline in the percentage of students dropping out of school from the beginning of this century until the 1970s, and the failure of the dropout rate to continue to decline, is evident when viewed in this format.

Nationally, the dropout rate that has been accepted and reported in educational research and literature is 25% or slightly higher (Baker & Sansone, 1990; Butchard, 1986; Casey & McSwain, 1989; Downing & Harrison, 1990; Fine & Zane, 1989; Finn, 1991; Florida Department of Education, 1988; George et al., 1992; Hull & Parnell, 1991; Jensen & Strauser, 1994; Morris, 1994; Roderick, 1993; Sanchez, 1994; Shippee, 1992; Thurow, 1992; Weis, Farar, & Petrie, 1989). In many central-city high schools today, fewer than half of entering students graduate (Jensen & Strauser, 1994). "Chicago has reported a dropout rate of 50% for a number of years; however, one study on Chicago calculated that 74% did not graduate with their peers" (Reyes, 1989, p. 20).

Florida's reported dropout rate during the last decade ranges from 32.6% (Florida Department of Education, 1988) to 41.4% (Hodgkinson, 1991). The 1982 graduation rate of

Figure 1

Historical Perspective of the Dropout Rate
in the United States



Sources: Catterall, 1986; Grossnickle, 1986; Hodgkinson, 1985; Hull & Parnell, 1991; Institute for Educational Leadership, 1986; Mirochnik & McCaul, 1990; Morris, 1994; Rumberger, 1986; Sanchez 1994; Titone, 1982; Tyack, 1974; Van Denburg, 1911; Wehlage, 1987; Whittlebols & Triplett, 1986.

Florida ninth graders in 1986 was 62%, ranking Florida 50th out of the 50 states. "Although retention rates are notoriously inaccurate, the rankings may be fairly close" (Hodgkinson, 1988). Florida's ranking of the graduating class of 1994 has improved to 43rd place, but Florida remains close to the bottom in the percentage of students who drop out prior to completing high school (Hodgkinson, personal communication, March 29, 1996).

The dropout rate may have started to improve in the early 1990s. The National Center for Educational Statistics indicated an increase in graduation rate of 17 and 18 year olds from 75.2% in 1990 to 80.8% in 1993. However, the graduation rate of 21 and 22 year olds, which includes students earning GEDs, has dropped slightly from 86.1% in 1990 to 85.9% in 1993 (McMillen et al.,1994). The Texas Education Agency (1995) reported a reduction in dropout rate from 27.2% to 15.8% for the same years; Austin, Texas, recorded only a small decrease from 24.4% to 23.3% (Sanchez, 1994). Holtzman's (1993) study of the New York City schools found a decrease in dropout rate but no improvement in graduation rate. He summarized that schools may be encouraging students to stay longer, but may not have improved their chances of graduating.

The absolute or accurate number measuring the dropout rate is not the important factor in the dropout discussion.

"We can get into arguments about whether the dropout rate is 5%, 14%, or 25% . . . any dropout rate represents an incalculable loss of human potential and staggering economic costs to society" (Hamby, 1989, p. 21). No one can provide an exact measure of the dropout rate because of different definitions, inaccuracies in reporting, and deliberate manipulation of data. The problem is not determining how to calculate the dropout rate or in determining its accuracy; it is meeting the educational needs of all students so that they may graduate from high school prepared to be contributing members of our democratic society (Washington, 1994).

Dropout Indicators

Florida's Department of Education (DOE) requires that students meet specific eligibility criteria for entry in dropout prevention programs. For educational alternative programs serving the unmotivated/unsuccessful student, eligibility criteria must include retention, failing grades, high absenteeism, and low achievement test scores, as well as other criteria developed by the school district (Florida State Board of Education, 1991). The research literature maintains that the criteria specified by the Florida DOE are appropriate indicators of at-risk students and also identify an additional major indicator--low socioeconomic status.

Falling behind one or more grades, being retained one or more times, or being over age for grade were different definitions in the literature describing the same problem that creates increased chance of students dropping out. All of these criteria describe students who have not progressed with their age group and find themselves in classes with younger students (Frazer & Wilkinson, 1990; Institute for Educational Leadership, 1986; McCaul, 1989; Morris, 1994; Schulz, Toles, & Rice, 1986; Sklarz, 1989; Wylie & Hunter, 1994). "It is clear in the research that those students who have repeated one or more years are more prone to drop out" (Reyes, 1989, p. 26). Hammach (1986) cited a study of ninth-grade students in Chicago that found that the more years students were over age, the more likely they were to drop out. Students at the normal age of 14 years had a dropout rate of 37.0%, 15 year olds a 59.9% rate, and 16 year olds a 68.8% rate. In Roderick's (1993) longitudinal study of a Massachusetts school district, she found that being over age for grade is the most easily measured and reliable index of school leaving. "Age is positively and statistically significant associated with the likelihood of early school leaving" (p. 117). Her study also found no difference in dropout rate between students who were over age because of retention and those who were over age due to entering school late.

Multiple studies found academic difficulty, evidenced by poor grades and/or failing a subject, one of the strongest predictors of dropping out (Frazer & Wilkinson, 1990; Left, 1994; Washington, 1994; Sarkees-Wircenski, 1991; Wylie & Hunter, 1994). "If one were allowed a single piece of information about dropping out, he could do no better than to know the student's grades" (Catterall, 1986, p. 4). In a study to determine the predictors of dropouts, Ganim (1991) found grades to be the best predictor, and failing grades in eighth grade were the best predictor of all. Principals ranked "course failure" as the number-one reason for students dropping out of school (Lane, 1989). Students with a "D" average are five times more likely to drop out than students with a "B" average (Pallas, 1986).

Absenteeism long has been found to be an identifier of at-risk students (Ziegler, 1928). Current research continues to find a relationship between absences and students who leave school prior to graduation (Washington, 1994; Frazer & Wilkinson, 1990; Left, 1994; Roderick, 1993; Wylie & Hunter, 1994). Absenteeism was found to be the strongest student-level predictor of dropping out in some studies (Bryk & Thum, 1989; O'Connor, 1985). Specifically for ninth graders, Jenifer's (1989) study found absences to be a significant predictor of dropping out of school. A direct correlation exists between attendance and dropping out (Casey, 1990). Hamby's (1989) study found that "a pattern of poor attendance is one of the most obvious early signs of the potential dropout" (p. 22). The human tendency to avoid problematic and frustrating situations makes school avoidance a useful symptom of at-risk student behavior. Moreover, the amount of avoidance gives a sense of the extent of the marginal conduct. An absence rate of five percent (nine days per year) can be explained under normal and legitimate reasons. Absences beyond that indicate a need for concern (Sinclair & Ghory, 1987).

One of the major criteria for identifying at-risk secondary students reported by the American Association of School Administrators is low standardized test scores. The report indicated that students with scores in stanines 1, 2, 3, or 4 were at risk of dropping out (Brodinsky & Keough, 1989). Low achievement test scores were found to be statistically meaningful in the prediction of at-risk students in a study of students in four states (Frazer & Wilkinson, 1990). Students who have demonstrated poor performance on standardized tests are more likely to drop out (Pallas, 1986).

Poor and disadvantaged students are three times more likely to drop out (Hahn et al., 1987). Hodgkinson's (1985) demographic research found poverty to be a strong predictor of students who will drop out of school. Rumberger's (1987) research on high school dropout found low socioeconomic status to be the most important indicator of dropping out. The Institute for Educational Leadership's (1986) studies concluded that students classified as low socioeconomic status should also be classified as at risk of dropping out. Low socioeconomic status is often noted in the research and literature as a predictor of dropouts (O'Connor, 1985; Washington, 1994; Wylie & Hunter, 1994).

Students who drop out of school are not solely from the group of lower-achieving or less academically talented students. "Only 32% of dropouts are educationally handicapped, and 70% score above 90 on IQ" (Butchard, 1986). There is no relationship between IQ and continuing in school (Ohio Department of Education, 1988). Lower intelligence is not the cause of dropping out (Reyes, 1989). "At-risk students display a broad range of academic achievement and potential; some of them very competent in the essential skills required by schools" (Wehlage, 1989, p.57).

Many youngsters who have the capability of contributing to society are losing that opportunity because schools fail to hold them long enough to develop their talents. At-risk students can be identified, they are capable of learning, and it must be the mission of schools to succeed with these students. "As long as one student drops out of school each day, our nation's economic future is at risk" (Washington, 1994, p. 220).

Ninth-Grade Students Most at Risk

The ninth grade is difficult for most students and can be devastating for those who are anyway at risk (Ascher, 1987). A Texas study found that "in every area investigated, ninth grade presented the greatest challenge to students, parents, and educators" (Austin Independent School District, 1987, p. 1). The high correlation between poor school performance in the ninth grade and dropping out gives a powerful endorsement of holding power strategies being focused on the ninth grade (Troob, 1985).

Enrollment is dramatically higher in the ninth grade than any other grade level. This phenomenon is caused by students failing to earn a sufficient number of credits during their ninth-grade year to be promoted and therefore, not earning classification or status to 10th grade. They remain in the ninth grade for multiple years even though some school districts require them to pass as few as four of seven courses to gain promotion to 10th grade. Statistics from the state of Georgia show that a fifth of all students who are not promoted are ninth graders (Ascher, 1987). A study in Texas study found that retention is higher at ninth grade that any other grade: 22% at ninth grade, 9% at 10th grade, 4% at 11th grade, and 2% at 12th grade (Austin Independent School District, 1987).

The ninth grade is the critical point in a student's school career. Most students who make the decision to leave school do so in the ninth grade. "A rise in both academic failures and dropping out highlights the precariousness of the ninth grade" (Ascher, 1987, p. 1). A study of the dropouts in Austin, Texas during the 1993-1994 school year found that the highest number of dropouts was at the ninth grade: 140 students in eighth grade, 763 in ninth grade, 343 in 10th grade, 264 in 11th grade, and 286 in 12th grade (Sanchez, 1994). While many students actually leave school as sophomores, it is because they are not 16 years old and cannot legally drop out. The final decision to drop out for these students often occurs in the freshman year (Sween, 1989).

In Dropouts in America: Enough is Known for Action (Hahn et al., 1987), the authors' research found that while the grade level in which the students drop out of school varies from place to place, most students drop out before the 10th grade. "Prevention programs at the junior and senior level are just too little, too late" (p. 24). The identification of at-risk students and the implementation of strategies to prevent them from dropping out of school must begin as early as possible.

Absentee rates are higher for ninth-grade students than students at any other grade level (Austin Independent School District, 1987). In a study to develop early identification factors and predictors of students at risk for dropping out of school, Block-Pedego found that the number of absences are a significant predictor of dropping out of school (1991). Many dropouts had at or above grade level performance in elementary and middle school. It was when they entered high school that they began to experience difficulty with grades and attendance (Ramsey, 1988).

The difficulty of ninth grade increased in districts where ninth graders are the youngest students in a four-year high school. When Seattle, Washington integrated ninth graders into high school these students showed marked increase in absences and dropout rates over the next three years (Ascher, 1987). The school district studied in this dissertation implemented the middle school concept in the early 1970s, moving the ninth graders to the high schools at that time.

"Clearly the ninth grade is the moment of truth for many students. Indeed, for every four new ninth graders, there is one ninth-grade student who failed to earn enough credits to gain 10th-grade status" (Austin Independent School District, 1987). Implementing an alternative program for high school students at the sophomore year or later in high school will miss the majority of at-risk students (Pallas, 1986).

Alternative Schools and Magnet Programs

A magnet program in an alternative setting can provide a unique environment for students. It can provide a variety of instructional strategies, social situations, and curriculum different from the those found in the traditional high school.

The American high school system is well-defined by the word "traditional." Since the early 1890s, the United States has strived to design one common system. Tyack (1974) devoted an entire book to this century-long process--The One Best System. He tracks to the 1970s the development of the high school from the NEA Committee of Ten that declared the function of high school as:

> to prepare for the duties of life that a small proportion of all children in the country . . . who show themselves able to profit by an education prolonged to the eighteenth year, and whose parents are able to support them while they are in school(p. 204).

He found that attacks on the system have been numerous and constant through this century, but leadership still looks toward the one best system. "The search for the one best system has ill-served the pluralistic character of the American society" (p. 11). "Common sense suggests that no one system of schooling can successfully educate all learners, despite a century of efforts to create 'one best system'" (Butchard, 1986, p. 5).

The traditional school has a curriculum and structure that favors the academically talented middle-class child and is highly prejudicial to the non-academic and low-socioeconomic youngster. If schools are to meet the needs of all students, and in particular those at-risk students, the traditional schools' curriculum and structure must be modified. Alternative schools are the best method of accomplishing this change (Wircenski, 1991). The bureaucracy and tradition of traditional high schools creates an environment hostile to change (Fine, 1994).

Alternative schools stress options for students to allow them to further customize the school to their learning needs. Options include community involvement and work experience, self-scheduling, independent study, and dual enrollment. Alternative schools offer innovative instructional techniques and activities including: competency-based instruction, individualized instruction, block scheduling, integrated curriculum, work-based learning, and team teaching (Raywid, 1982). One of the most fundamental features of the effective alternative schools is establishing a distinct, identifiable unit or entity with its own staff and students, and some degree of organizational coherence and separateness from other units (Wircenski, 1991).

"In most alternative schools, potential dropouts . . . are less likely to be labeled as deviants. Within a traditional school setting, students can be compared unfavorably with the school norm" (Raywid, 1982, p.11). The norm in an alternative setting is non-traditional, reducing the tendency for the at-risk student to be compared.

The definitions of magnet schools in the education literature often include a reference to their stated purpose of reducing racial segregation in a school district. "Magnet schools are schools which accomplish racial desegregation on a voluntary basis" (Metz, 1986, p. vii). "Magnet schools . . . play a unique role in desegregation" (Blank, 1984, p. 271). In 1976, the amendments to the Emergency School Aid Act provided funds for the development of magnet schools to accomplish desegregation. Court-ordered magnet school plans have been made as a substitute for mandatory busing (Rossell, 1979).

Later development, created by curriculum and instructional needs, established magnets for different purposes, as recognized by Rossell (1990): " {in some cases} magnet schools are educational options, not desegregation tools" (p. 43). Since the original definition of a "magnet school" relating to desegregation still holds true today, and remains in the consciousness of educators and the public, this study uses the terms "magnet program" to define a differentiated curriculum open to all students in a school district and "magnet site" to define a magnet program offered in a location away from the traditional high school.

A magnet program: (a) has a special curriculum or method of instruction, (b) relies on voluntary enrollment, and (c) offers access to students beyond regular attendance zones (Blank, 1984). A magnet program is an alternative to the traditional curriculum, traditional school structure, and traditional school attendance zone plans, but may not always meet the definition of an alternative school--serving students who do not find success in the traditional setting.

Butchard's (1986) study of dropouts and alternative schools indicated that "students primarily leave school because they personally dislike their experience with school" (p. 1). His report encourages educators to develop alternative schools to serve at-risk students. The most successful schools he studied were removed from the traditional high school, "recognizing that the regular school appears threatening or triggers reactions in alienated students" (p. 5). He further states, "alternative school dropout prevention programs have resulted in remarkable changes in attitude and behavior beyond such quantifiable aspects as attendance and achievement" (p. 14).

The image of alternative schools does not match their performance. Butchard (1986) found that even though alternative schools frequently suffer from bad press, they in fact were a remarkable option for solid educational accomplishment. In a study of successful alternative programs conducted on traditional high school campuses in California, Titone (1982) reported that those not involved in the program, both students and staff, often categorized program participants as "morons." Locating an alternative program on a traditional high school campus causes students and staff to suffer from this undeserved bad image and resulting conflicts, lowering the chances for student achievement (Wircenski, 1991).

Cullen (1991) found that a magnet site contributed to the success of an alternative program in New York. His study found significance in two variables: credit accumulation and a high pass rate on the Regents Competency Tests. Casey and McSwain (1989) also documented a successful program operated in a magnet site serving six school districts. In a school-within-a-school alternative program for ninth graders located at a career magnet high school, students were found to have significant improvement in academics and attitude, but higher absences (Opuni, Goebel, & Sanchez, 1990). In a study of numerous alternative programs across the country, one of the characteristics determined as successful was locating the program separately from the comprehensive high school (Greene, 1986).

> At the secondary level, the most important characteristic of programs serving at-risk youth is indeed that they are programs . . . It may well be that the only way in which certain youth . . . can be reached at all is to take them completely out of the school context and build a program minus the added burden of overcoming the residue of bad feeling toward the school they may have built up. (Druian, 1986, p. 18)

The alternative school approach is not a new strategy to meet the instructional needs of students. Brodinsky and Keough (1989) trace its formal beginnings to 1938 and the start of the Bronx High School for Science. Doyle and Levine (1984) claim the first magnet school was the Boston Latin School, founded in 1635. Magnet schools serve the gifted, the average--and they can also serve with distinction the potential dropout. Simply because the magnet school is an alternative to the traditional school, it often serves to hold and challenge potential dropouts (Brodinsky & Keough, 1989).

Some studies have found that school-related factors, such as those created in alternative schools or magnet programs, can make a difference in retaining students in school. In a study of college dropouts, Tinto (1987) found that students' chances of finishing school can be influenced by institutional practices. Brooke (1989) studied six suburban school districts' dropout prevention programs and concluded: "student's withdrawal from school is a response to alienation or goal failure experienced in the academic and social context of school" (p. 1266A). Other studies also found benefits for disadvantaged and at-risk students from attending alternative or magnet schools (Bryk & Thum, 1989).

One definition of at-risk students uses school as the factor in students' decision to drop out. Frederick County, Maryland, focuses on one word to define this--incompatibility. "Incompatibility between school and students is the inability of the student to adjust to the school and the school's inability to serve the students" (Brodinsky & Keough, 1989). Rumberger (1987) found that almost half of all dropouts cite school-related reasons for leaving school.

School size is one school-related factor that has been related to dropout rate. Barro and Kolstand's (1987) study Who Drops Out of High School? Findings From High School and Beyond concluded that "large school size is associated with substantially high dropping out" (p. 51). Druian (1986) found that small program size enables the development of close, responsive relations between teachers and students; frequent monitoring of performance; and accurate prescription of corrective action. Magnet programs and alternative schools usually provide a smaller school environment for students, thus taking advantage of these effects.

The literature and research have found little or no relationship of school-related factors to dropout rate. Many educational leaders have argued that school-based strategies for retaining the potential dropout are unlikely to have any positive effect (Wehlage, 1989b). "Many characteristics associated with high school dropouts . . . are not school-related and may not have school-based solutions" (McLaughlin, 1990, p. 13). A dissertation analyzing school-related factors in students' decision to drop out of high school found that school-related factors did not play a major role in the decision of Georgia high school students to leave before graduation (Agan, 1991). This study found that counseling and negative relationships with teachers and/or principals were more deciding factors. Another dissertation evaluated a community-based program for dropouts, designed to decrease the complexity of the school setting. This study found no significant differences between the students in the program and a control group of students at the end of one year (Olga, 1989).

Although the Barro and Koldstand (1987) study found a relationship between school size and dropping out, it concluded that school-related factors have little effect:

> We have found very little evidence that school variables affect dropout rates. Of the variables tested, only school size (enrollment) and teacher turnover rate show significant effects in a multivariate model with personal and other background factors controlled. (p. 51)

It has been argued that some non-public schools have better success than public schools in retaining at-risk students and that their school structure, instructional methods, and/or curriculum provide a more successful environment for these students. Catholic schools are markedly more effective than public schools in retaining to graduation students who had family risk factors and students who had academic and discipline problems that typically make them at risk of dropping out (Coleman & Hoffer, 1987). Lee and Bryk's (1988) research on achievement in Catholic and public schools concluded that disadvantaged young people would benefit from attending public schools that were organized similar to Catholic high schools. They found high achievement and lower dropout rates in the Catholic schools.

There are substantial differences in dropout rates between public and Catholic high schools. "Even after figures are adjusted for student characteristics, the probability that students will drop out is substantially less in the Catholic sector than in the public sector" (Bryk & Thum, 1989, p. 354). However, Burkham and Lee (1990) conducted a study using the "High School and Beyond" data and concluded Catholic schools mask their dropout rates by transferring students who may drop out back to the public school system.

> While the public schools' dropout rate is four times the dropout rate in Catholic schools, the percentages of transfer students reveal a different scenario. With transfer rates three times their dropout rates, the Catholic schools' reported success with holding at-risk students in school may not be as complete as previously believed. (P. 24)

Some researchers propose that alternative programs be developed as a unit in a traditional high school, while others purport the benefits off-campus magnets. Robbins, Mills, and Clark (1981) recommended to principals through the National Association of Secondary School Principals that alternative programs be incorporated into the regular high schools. They "must be part of what is perceived as the 'regular' high school" (p. 55). However, the research does not always support the conclusions stated in their report.

Cope (1989) conducted a study of 132 students in an alternative program in a traditional high school. Although individualized educational plans were developed for each student and additional resources allocated, no significant differences in achievement were found. An alternative program with differentiated curricula, a half-time counselor, and a full-time instructional aide was implemented on a regular middle school campus and served 20 students. An evaluation of this program found no significant differences in the four variables tested: absences, grades, attitude, and self concept (Wheeler, 1990). A study by Catterall (1987b) found no significant differences for students in a dropout prevention program conducted on a traditional high school campus. The students' performance was improved in their alternative classes, but was lower in regular classes. The phenomenon of singling out and classifying students (the fabled red birds and blue birds), making them feel different and less capable, actually lowered their performance.

The first of four characteristics of successful dropout prevention programs identified in Hamilton's (1986) research was that the potential dropout should be separated from other students. His study also included West Germany's school system and found a common element for success: "One feature is the separation of potential dropouts from other students and their placement in programs that differ markedly from the ordinary high school experience" (p. 416).

Placing students in a separate program can create novelty and special attention to students, which may bring the Hawthorne Effect into play. Raywid (1979) suggests that should be precisely the intent of educators. She suggests rather than avoiding the Hawthorne Effect, it should be incorporated into programs to increase student achievement. "Perhaps the key to reversing the widespread alienation in schools is precisely the kind of experimentation where all concerned are keenly aware of and excited about the adventures they are sharing" (p. 64).

Separating students for a differentiated program can fall under the definition of tracking. Students placed in lower tracks have been found to have higher dropout rates, a lower chance of entering postsecondary schools, and less access to good pedagogical practices (Goodlad, 1984). Tracking not only negatively affects academic performance but also negatively affects educational and occupational aspirations, satisfaction with school, and self-esteem (Vanfossen, Jones, & Spade, 1987).

However, moving students from a traditional high school to a magnet site may move them from the negatives of being in a lower track to an environment that provides them the support, high expectations, and quality instruction they were missing. Small, magnet-site programs offer a sense of comfort. "In contrast to the jocks-versus-freaks atmosphere, there is an accepting but not uncritical atmosphere, the criticism offered in a constructive manner" (Wehlage, 1983, p. 36). Hamilton's (1986) study of successful dropout prevention programs and of the West German secondary school system found that separating students was a common characteristic. "Although I am concerned about the negative consequences of grouping or tracking, I believe the differential treatment of potential dropouts can be justified" (Hamilton, 1986, p. 420).

"The traditional high school, no matter how it is modified, may not be the best mechanism for reaching dropouts" (Harris, Hedman, & Horning, 1983, p. 36). There is no "one best system" for all students as an effective design for high schools. Alternative curriculum and instructional strategies are needed for many students, particularly those at risk of dropping out of school. Alternative schools have been promoted in the educational literature as a solution and, in a some instances, have proven effective. In other instances, where alternative programs were implemented on traditional school campuses, they were found to be ineffective. Removing students who are not experiencing success from the traditional high school also has been promoted as a solution for the at-risk student. The literature contains broad support for magnet-site alternative schools, but is weak on evaluative studies documenting their effectiveness.

Alternative schools, by definition, implement curriculum and instructional strategies different from traditional schools. The autonomy allowed staff and teachers in designing instructional programs allows them the opportunity to test expanded conceptions of learning and curriculum and can encourage the kinds of school reforms that will lead to greater engagement by a broad range of students. Alternative schools hold the possibility of being the basis for broader school reform. "Just as the dropout problem is the observed tip of a much broader disengagement from school, interventions with at-risk students can show the possibilities of a general reform of schooling for the great majority of students" (Wehlage, 1989a, p.72).

Elements of Successful Alternative Schools

> A review of the research leads to one major conclusion: an effective dropout prevention program at the high school level cannot be based on one single element, such as remedial instruction or the provision of social services. To succeed, dropout prevention of older youth requires a cohesive, integrated effort. (Hahn et al., 1987, p. 48)

School and class size is an area displaying consistency in the literature. "Virtually all the literature cites size as a crucial element" (Butchard, 1986, p. 16). Jackson's (1994) study of effective programs for at-risk students found small school size to be a core element. In a study of 14 successful alternative schools, Smith (1991) found the total population ranged from 60 to 150 students. Extensive research indicates that large secondary schools can severely damage a supportive climate for learning (McDill & Legters, 1994). A study of Texas schools found that the dropout rate in schools with more than 1,000 students was more than twice as large as in schools of 700 to 1000 and 500 to 700 students (Texas Education Agency, 1995). In A Place Called School: Prospects for the Future, Goodlad (1984) recommends that traditional secondary schools be kept small as a means of improving student success--with a preferred size of 300 to 600 students with a maximum of 800 students. Successful alternative schools and programs "enroll as few as 50 students but seldom more that a few hundred. This smallness helps foster enduring relationships among adults and students" (Cuban, 1989, p. 30). Small schools are more personalized or less anonymous and have a more homogenous student body, more flexible schedules, and smaller classes. "All of these features should increase the chances that at-risk students will obtain the necessary assistance to succeed" (Wehlage, Rutter, & Trunbaugh, 1987b, p. 195).

Classrooms in alternative education programs should have low pupil:teacher ratios (Eubanks, 1995; Sarkees-Wircenski, 1991; Wylie & Hunter, 1994). Small class size allows individualization of instruction and provides opportunity for the development of close relationships between teachers and students (Casey & McSwain, 1989). Small class size was one of the core elements of effective programs identified in Jackson's (1994) study. In a nation-wide study of programs designed for at-risk students, Greene (1986) found that low teacher:student ratio was one of the characteristics of successful programs. A high level of personalized instruction, so often needed by at-risk students, is more available in classrooms of 15 to 20 students (Cuban, 1989).

Fine and Zane (1989) studied the causes and solutions for the female dropout. Their study recommended that females could be more successful if schools restructured into smaller units where students would be a "community unto themselves, in which they are known to each other, appreciated when present, missed when absent, and tracked down when truant" (p. 45). Fine's (1994) research on improving urban schools in Pennsylvania has also shown small size an important factor for student success. Wehlage (1983), in his review of effective programs completed for Phi Delta Kappa, noted that successful programs enrolled 25 to 60 students with two to six faculty members. "This provides flexibility and allows the faculty to be responsive to the needs of students" (p. 32).

Choice has been identified as an important component of successful magnet dropout prevention programs. Butchard (1986) found that in a majority of the successful programs he studied both teachers and students have opted for the program. Casey and McSwain (1989) found voluntary enrollment contributed to the success of the programs they studied. "Students are committed to extra effort by the simple act of voluntarily enrolling" (Doyle & Levine, 1984,

p. 268). Voluntary choice reduces the alienation with school that causes many students to drop out (Newmann, 1989).

Having teachers choose to work in alternative education programs allows them to make a commitment to the at-risk student through their decision to volunteer (Cuban, 1989). Successful teachers in dropout prevention programs tend to be activists and risk-takers who develop and act on their own ideas. Traditional schools are not prepared to deal with such people. Selecting alternative program staff through volunteers draws these teachers to the program. Additionally, a volunteer teaching staff builds a culture characterized by collegiality and entrepreneurship contributing to the success of dropout programs (Smith, 1991).

Autonomy is another factor cited in the literature on magnet and alternative programs. "Successful schools also are autonomous. Their staff feel empowered to create cohesive programs with clear, well-defined goals and to have ownership of the programs" (Butchard, 1986, p. 16). Program autonomy is important because it gives teachers a sense of program ownership and empowerment. Successful programs have given teachers control of admission, dismissal, course offerings, independent study, and unique credit arrangements (Wehlage, 1983). Howe (1984) related autonomy of teachers in curriculum and operation of their schools to management techniques, such as those proposed by Demming, that are successfully changing the way American business operates. "The best programs empower teachers with both the authority and the responsibility to solve problems others have not been able to solve" (Wehlage, 1983, p. 33).

Individualized and competency-based instruction were cited by a number of studies to contribute to the success of dropout prevention programs (Casey & McSwain, 1989; Duchenfield, Hamby, & Smink, 1990; Hahn et al., 1987; Jackson, 1994; Sarkees-Wircenski, 1991). Competency-based promotion, determined by the mastery of verifiable skills, allows students to progress at their own pace, helping offset negative school attitudes among slow learners (Institute for Educational Leadership, 1986). Individualized learning approaches with the course content and the mode and pace of presentation tailored to the individual student's aptitude and interests are of major importance to prevent the sense of academic failure and low self-esteem characteristics of dropouts (McDill et al., 1986).

Combining the results of the study of successful dropout prevention programs in the United States with research on the West German system of preparing all students for careers, Hamilton (1986) found that a shared characteristic is a strong vocational emphasis. Additionally, he found that much learning occurs outside the classroom, often in connection with paid employment. Some studies have shown that curricula which integrate vocational and academic subjects with work experience are promising because they enable disaffected students to acquire salable skills and to perceive that their schooling as relevant to the "real world" (Hull, 1995). When students are afforded the opportunity to be involved in the work-world, they can meet adults who are successful in a career and who have the social characteristics necessary to achieve in the mainstream of society. "Dealing with 'real' work or social issues is much more likely to provide personal involvement than is the conventional curriculum" (Wehlage, 1983, p. 38). Community-based work experiences also give the student an opportunity to learn and succeed without being hindered by reputation and provide an environment that minimizes negative stress while building confidence (Jensen & Strauser, 1994). Integrating work-based learning with school subjects is an effective way to ground learning in actual experience (Hull, 1995).

> Particularly useful are the programs which combine intensive, individualized training in the basic skills with work-related projects. Vocational education and work-study strategies seem to work well, as does the 'alternative high school' pattern. When the relationship between education and work becomes clear, most of these potential dropouts can be motivated to

> stay in school and perform at a higher level. (Hodgkinson, 1985, p. 12)

Flexibility--afforded by a school structure similar to the elementary model, in which students spend multiple hours with one teacher each day, work with only a few teachers, and may even have the same teacher multiple years--has been cited as a successful strategy (Cuban, 1989; Fine, 1994; Jensen & Strauser, 1994). In such a structure, instruction is not forced into fixed time periods and seven or more subjects are not addressed each day. The schedule can change from day to day to meet student needs. The current structure of high schools with six or seven periods a day and separate subjects does not provide the needed flexibility for student learning (Sizer, 1984). "Higher levels of student membership and engagement can be fostered by allowing for the development of long-term rather than brief relations between students and teachers" (Smith, 1991, p. 64).

A sense of community is also fostered by the elementary model; students become part of an extended family rather than feeling autonomous and emotionally distant, as in traditional high schools. A family atmosphere is created, where students feel comfortable with both adults and peers (Wehlage, 1983). Trusting relationships, mutual caring, and responsibility can develop through the extended contact provided by the elementary model (Newmann, 1989). The increased social interaction may promote an attachment with the school, making the student feel valued and wanted, creating a bond with the school and increasing the student's chances of remaining in school (Natriello, Pallas, McDill, McPartland, & Royster, 1988). This sense of community was also believed to be the major factor in the successes found in Catholic schools' holding power in the Coleman and Hoffer (1987) study.

Although some successful schools for at-risk students have been identified and school conditions that assist at-risk students have been studied, the challenge is to create a school structure that truly engages young people in academics and helps them become members of the school community (Wehlage, 1989b). Student needs are complex so the programs designed to meet their needs must be comprehensive. Addressing the education needs of at-risk students through single-strategy solutions has proven unsuccessful. Comprehensive, full-day programs employing multiple strategies are required to provide the curriculum and environment to help at-risk students progress (Fine, 1994). After reviewing programs that employed single strategies, such as basic skill remediation or vocational education, Wehlage (1983) concluded:

> Our review of the research literature and evaluation of programs suggests that {single-strategy programs} are of limited value because they are based on a limited and simplistic conception of the problem. At worst, these responses result in tracking students into unstimulating courses that stigmatize the students as remedial. (p. 18)

No one answer exists to meet the needs of at-risk students. Just as there is no one best system of education for all students, there is no one best system for students at risk of dropping out of school. Developing dropout prevention programs is a complex task because of the wide variety of social, emotional, environmental, economic, and educational issues that affect at-risk students who leave school before graduation. "As a result, there is no single or simple solution to the task of suggesting strategies for dropout prevention programs that will be effective with all at-risk students" (Wircenski, 1991, p. 175). "There is no single solution to the dropout crisis. Just as there are a variety of causes behind a student's decision to drop out of school, a great many different strategies exist to prevent this from occurring" (Duchenfield et al., 1990, p. 1). School districts must identify a set of components to increase the holding power of schools serving students at risk and incorporate them into programs to meet the needs of their students (McPartland, 1994).

Need for the Study

> There have been few studies that carefully describe school structures or their influences on students' school status, especially with respect to dropping out. There is reason to believe that some solutions to the current dropout problem may lie within the schools themselves. (Baker & Sansone, 1990, p. 181)

There has been much written on the subject of high school dropouts and much research on dropouts. But the focus of most of the research is on the social causes, student characteristics, and demographics, which can provide the schools an excuse for their lack of success rather than suggestions for increasing students' success (Cope, 1989; Payne, 1989). Roderick (1993) cites the great amount of literature on dropout prevention model programs, but very little research documenting results. Much of the research has focused solely on the profiles of the dropout student population rather than on analyses of the interrelationships of school efforts at dropout prevention and learner needs (McPartland, 1994). The research literature suggests that school organization factors might be especially promising for dealing with the high school dropout problem; however, there is no systematic body of research that is conclusive (Roderick, 1993).

> Implicit in much research on school dropouts is the assumption that a better understanding of the characteristics of dropouts will permit educators to develop policies and provide practices that will reduce the number of adolescents who fail to graduate. The intent is noble, but the results have been negligible

> because the focus on social, family, and personal characteristics does not carry any obvious implications for shaping school policy and practice. Moreover, if the research on dropouts continues to focus on the relative fixed attributes of students, the effect of such research may well be to give schools an excuse for their lack of success with the dropout.
>
> Since traditional research has tended to identify characteristics least amenable to change, the focus on new research might better be directed toward understanding the institutional character of schools and how this affects the potential dropout. {The} holding power {of schools} ought to be part of our definition of school excellence in a democratic society, where schools are to serve all citizens, not just the academically agile. (Wehlage & Rutter, 1986, p. 376)

The dropout problem has remained exceedingly difficult to solve, primarily because there is no clear-cut formula to dropout prevention (George et al., 1992). Future research should recognize that there are different types of dropouts and that there is no typical dropout (Lane, 1989). There is consensus in the literature on the need for organizing a comprehensive program, focusing on a specific group of at-risk students, and documenting the results in terms of student achievement. "Knowing how to put together the right combination of people, things, and ideas to create a productive setting that supports at-risk students and the adults that work with them remains just out of our reach so far" (Cuban, 1989, p.30). "The most important issue facing educators is that of developing a concept of schooling that will be attractive enough to hold these students, but effective enough to promote their learning and development" (Olgetree, 1990).

The problem is known. Many instructional strategies and school-structure possibilities that assist at-risk students in learning are known. The need exists for programs to be developed and research completed on their effectiveness. The U. S. General Accounting Office (1986) has said that the identification of programs "that work" is necessary to assist school districts. "There are two dropout problems in the United States--one is the troublesome incidence of school leaving, and the other is the challenge of doing something to improve things" (Catterall, 1986, p. 1).

Summary

Lakebrink began his introduction to Children At Risk (1989) with a quote from Thomas Jefferson, "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be" (p. xii) and ends with "A child at risk is a nation at risk" (p. xv). This author cannot say it more strongly.

The economic and social consequences to the individual and to the nation are negative and large. It is incumbent upon schools to design and implement alternative education programs that will provide the holding power and appropriate education for all students.

Although dropout rate statistics are questionable due to varying definitions and calculation methods, data collection problems, and even fraud, there is consensus that whatever the true number may be, it is too great. This country cannot afford to lose the talent of its youth nor afford to support those whose lack of education denies them a place in society as productive, contributing members.

At-risk students, who have a low probability of completing high school, can be identified. The research on predictors identifying these students is extensive. Students in the ninth grade have been identified as being the most at-risk.

It is the mission of schools to educate all students to preserve democracy in the United States. Allowing even a small percentage of students to leave school early is a failure in achieving that mission and a threat to the political structure of the country.

Alternative schools can offer a variety of innovative learning environments to better meet the needs of at-risk students and offer them increased opportunity of an education. Since students differ in interests, ability, and family background, there is no "one best system" of schools for all students. Alternative schools provide educators the format to design a variety of educational programs more directly related to students' learning requirements.

Magnet-site programs can take students away from a school structure that they may have identified with failure. The smaller school structure and/or small community within a school provided by magnet schools creates support for the students as well as focus and flexibility in curriculum. While some research has found that school-related factors, such as school structure, are not significant in keeping students in school, the educational literature is strongly supportive of the concept.

Successful elements in the structure of alternative schools have been identified: size of school; size of classes; choice for teachers and students; autonomy; individualized and competency-based instruction; integrating academic, vocational, and community-based learning; and flexibility. A comprehensive program, combining many strategies, is required for achieving success with at-risk students.

While the literature is expansive with articles on the characteristics of potential dropouts and discussion on the inaccuracies of dropout rate calculation, there is a lack of research documenting the effect of alternative programs on the achievement of students, particularly in comparison with control groups. It is recommended that research be conducted with differing groups of at-risk students in comprehensive programs and that the results be documented.

> The problem affects everyone, and how the nation responds will help determine whether we create a permanent underclass or social cohesion, whether we will enjoy the fruits of retirement or be destitute, and whether we will once again utilize our cities as places to work. (Mirochnik & McCaul, 1990, p. 2)

CHAPTER 3
METHODOLOGY

The purpose of this study is to determine if placement of unmotivated/unsuccessful ninth-grade students in a magnet-site program improves school attendance, credits earned, grade promotion, dropout rate, and graduation. Research questions were posed to investigate the achievement of these students as compared to two groups of similar students attending traditional high schools.

Research Questions and Null Hypotheses

Specifically, this study addressed the following questions:

1. Is there a difference in school attendance of unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

2. Is there a difference in credits earned between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

3. Is there a difference in grade promotion between unmotivated/unsuccessful ninth-grade students in a magnet-

site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

4. Is there a difference in dropout rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

5. Is there a difference in graduation rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

The following null hypotheses were tested:

$H0_1$: There is no significant difference in school attendance of students in the program and similar groups of students in traditional high schools.

$H0_2$: There is no significant difference in credits earned by students in the program and similar groups of students in traditional high schools.

$H0_3$: There is no significant difference in grade promotion of students in the program and similar groups of students in traditional high schools.

$H0_4$: There is no significant difference in dropout rate of students in the program and similar groups of students in traditional high schools.

HO_5: There is no significant difference in the graduation rate of students in the program and similar groups of students in traditional high schools.

Experimental Program Description

Placement in the magnet-site program was based on students' previous performance indicating a tendency to drop out of school prior to graduation. The indicators used for determining eligibility were based on Florida Department of Education guidelines and research in the educational literature. Indicators were limited to data normally found in school district data bases. The indicators included absences, grades, retention or being over age for grade, standardized test scores, and socioeconomic status. Student performance was measured in terms of school attendance, credits earned, grade promotion, dropping out, and graduation. The performance of the ninth-grade unmotivated/unsuccessful students in a magnet-site program was compared to two similar groups of ninth-grade students in traditional high school settings to determine if different school sites affect student achievement.

The first control group was comprised of ninth-grade students who self-identified as being at-risk by applying for entrance to the program. These students were not enrolled in the program because they decided not to choose that option or were denied admission due to lack of space.

This control group had an additional at-risk factor, creating a closer match with the treatment group, that could not be duplicated in the randomly selected group. That factor is the students' self-identification as having difficulty succeeding in the traditional high school and seeking differing options. The second control group was randomly selected from all ninth-grade students who met the eligibility requirements for the program.

The magnet-site alternative education program that is the subject of this study, hereafter referred to as "the program," was located in a central Florida school district of approximately 25,000 students. The district and program served urban, suburban, and rural students. The program was located on an alternative campus, which served a total of 400 students in a variety of non-traditional programs. The program was housed in portable classrooms, grouped closely together, and functioned as a school-within-a-school.

The program was designated to serve unmotivated/ unsuccessful students as an alternative to the traditional high school program and to the dropout prevention programs operated on each high school campus. The program operated as a magnet, serving students from throughout the school district without regard to school zoning patterns. Transportation was provided to all students.

Students were recommended by teachers, counselors, other adults, and themselves. After being informed of the program, students could express an interest in enrolling through an application process. Students applying for entry were evaluated based on the eligibility requirements for an educational alternative program as specified in Florida School Board Administrative Rules 6a-6.0524 and district-developed eligibility requirements approved by the Florida Department of Education. "Educational alternative programs are programs designed to serve students who are unmotivated/unsuccessful" (Florida State Board of Education, 1991, p. 340).

To be eligible for entry, students were required to meet a minimum of three of the following criteria based on performance during the previous school year: (a) more than 15 absences; (b) less than a 1.5 grade point average; (c) one or more years over age for grade; (d) standardized achievement test scores in stanines 1, 2, 3, or 4; (e) be classified as free or reduced lunch (as a measure of low socioeconomic status). Interested students completed applications, their eligibility was determined, and, following receipt of parental permission, were admitted to the program on a first-come basis. After the program was filled, additional eligible students were assigned to their zoned school or given other options such as adult education and placed on a waiting list.

Elements identified in the literature as being successful strategies for at-risk students were incorporated into the program design. Multiple strategies were employed to create a comprehensive program, addressing different learning styles and differing needs for support. Titone's (1982) research of successful alternative programs revealed that no one strategy could be identified as related to achievement gains by students. His report recommended that a combination of strategies be used. Exemplary programs studied by Weber and Sechler (1987) had a common feature of combining multiple instructional and organizational elements. Programs that incorporate multiple strategies have been found to meet the needs and requirements of students experiencing difficulties in the typical school environment (Robledo, 1986). Comprehensive solutions are required to address the multiple needs of at-risk students (Fine, 1994).

Small size in the total school, program, and classroom was cited by many researchers as important to the success of programs for at-risk students (Ramirez, 1990; Jackson, 1994; Texas Education Agency, 1995). Alternative programs designed as a school-within-a-school should serve 25 to 100 students and have two to six faculty members (Wehlage, 1987). "From a teacher perspective, small size facilitates continual face-to-face communication among faculty for planning . . . {and} permits students to be known in a personal way" (p. 219).

Small school size was accomplished by locating the program on a campus housing other non-traditional programs with a total campus enrollment of 400 students. Small class size was accomplished by assigning 15 students to each of the five teachers, made financially feasible to the school district through a weighted funding formula as part of the Florida Education Finance Program. This school finance system provides additional funding for certain classifications of students, such as those enrolled in qualified dropout prevention programs approved by the Department of Education. This design created a small-size program of 75 students.

Voluntary participation has been cited as a key component of successful alternative programs (Casey & McSwain, 1989). The alienation students feel toward school is reduced if they are allowed to select the school they wish to attend (Newmann, 1989). Staffing an alternative program through teachers who volunteer builds a cadre whose philosophy and teaching style match student needs and creates a culture of collegiality (Smith, 1991). It is foolish to create a dumping ground for students or teachers by assigning either students or teachers to an alternative program (Ramirez, 1990).

Choice was afforded to both the students and teachers. Student enrollment was totally voluntary; no students were assigned or placed in the program through staffing procedures. Teachers were selected though the district's normal advertising procedures of vacant teaching positions. Teachers applied for the positions, were interviewed, and selected. Any teaching certification was accepted, and three years of successful teaching experience was required. Because of the large number of applicants at the program's initiation, multiple interviewers were used, each interviewing a different group of candidates. The interviewers included the director of vocational education, supervisor of vocational education, and principal of the magnet-site school. After interviewing the candidates, the interviewers compared notes on the interviewees and the top candidates were extended offers for the positions. Teaching vacancies created by transfers and program expansion have been filled through the district's normal procedures with the principal making the decision on teacher selection.

The teachers were provided time for inservice training, curriculum development, development of program operation procedures and to attend state-wide dropout prevention conferences. Inservice training was conducted prior to the beginning of the program and during the first two years of program operation. Topics included philosophy of alternative education, state policies for program operation, integration of curriculum, applied academics, management of work-based learning, and student motivation. Curriculum development workshops were comprised of presentations of new materials and time for the teachers to build instructional activities. The teachers met as a team and developed forms and procedures for program operation.

Autonomy in curriculum and scheduling is a structural element found in successful alternative programs and recommended in the design of programs for at-risk youth (Smith, 1991). Sizer (1984) described the need for autonomy as giving room to teachers and students to work and learn in their own, appropriate ways. Tyler (1983) wrote that "effective changes in schooling require the participation of teachers in defining goals, in designing curricula, {and} in planning instructional procedures" (p. 464). "Autonomy is important because teachers are invested with the authority to achieve program success. It is clear where that responsibility lies" (Wehlage, 1987, p. 219).

Autonomy was built into the program by providing the teachers and school-based administrators flexibility in curriculum design, instructional strategies, awarding of credit, and scheduling. The teachers were organized as a team for planning the program, developing curriculum, and sharing the responsibilities for the operation of this school-within-a-school.

Successful programs reflect the concept of continuous progress or nongradedness. Passing and failing are not public displays where some students move ahead and others stay behind; mastery and achievement become personal benchmarks along the trail toward larger goals (Cuban, 1989). A study of 350 dropout prevention programs found that one of the common key strategies was the use of individualized instruction (Duchenfield et al., 1990). To meet the instructional needs of the diverse group of students identified as at risk, the mode and pace of presentation must be tailored to the individual student (Jackson, 1994).

Individualized instruction and competency-based curriculum were a part of the program design. Instructional activities developed by the teachers provided opportunities for students to progress at their own pace. When a student completed a course, credit was awarded, whether that occurred in the middle of a semester or in the beginning of the following school year.

The combining of the appeal of practical instruction through vocational education with academic courses was found to provide the basis for improved performance of at-risk students in a study of 10 California academy programs (Stern, Dayton, Paik, Weisberg, & Evans, 1988). Providing a curriculum that integrates the academic and vocational subjects and utilizes instructional strategies that are applied through "real world" problems enables students to gain marketable skills and perceive the curriculum as relevant and important (Hull, 1995).

Combining academic and vocational curricula was accomplished in the program though academic courses taught in an applied manner; the opportunity for students to enroll in some vocational offerings; and work experiences in the community through supported employment, service learning, or on-the-job training. Teachers were given extensive training in math, English, and science curriculum that provided both relevance and rigor. Instructional activities were related to practical or work situations rather than taught in a theoretical manner. Curriculum content included knowledge and skills required in many different careers and life situations. The instructional activities were designed to include problem solving and discovery learning rather than relying on memorization as the major learning tool.

Ramirez (1990) reported on-the-job-training (OJT) as an important factor in successful programs in two states. "On-the-job experience provides a sense of what the real world is about and builds commitment and responsibility" (Jensen &

Strauser, 1994, p. 176). OJT and other community-based, off-campus experiences for at-risk students are also supported by other researchers (Hull, 1995; Jackson, 1994; Walker, 1991).

Students in the program were given the opportunity to participate in activities outside the classroom to help provide the real-world experiences to reinforce classroom instruction. Activities were matched to student needs and wishes. The community experiences included: (a) work-based experiences with students receiving pay from private or public employers; (b) supported employment with students being paid stipends from a grant to perform work for public employers; and (c) service learning with students performing work for public and non-profit agencies, such as tutoring.

Researchers recommend restructuring of instructional time into longer blocks and allowing teachers to adjust the schedule. "One teacher may work with a group of students not for a semester or even a year, but for two or even three years; the same high school teacher may teach three subjects" (Cuban, 1989, p. 31). Programs with such scheduling flexibility have a sense of community, an extended family where achievement is important and so is caring for one another (Fine, 1994).

Flexibility was provided to both students and teachers through an elementary model, wherein students were assigned to one teacher for a multiple-hour time period. Students could alter their schedules within this period by choosing which subjects to study each day and how long to spend on each. Teachers had the flexibility to schedule speakers, field trips, and activities that would not have been possible in a traditional setting. Students could study with the same teacher for multiple years to build on a supportive relationship.

Research Design

A portion of the design of this study was patterned after a study of a program for at-risk students described by James S. Catterall (1987b). This study evaluated an alterative program, located on a traditional high school campus, that employed intensive counseling and increased adult support for students identified as at risk. Eligible students were placed in this program on a first-come, first-served basis. The treatment group enrolled in this program was compared with two control groups: (a) those students who self-selected for enrollment but were denied enrollment due to space considerations, and (b) a random selection from the remaining population of eligible students. Catterall (1987b) described the opportunity to have a control group that self-selected, providing another common dimension, as a critical component of the design. He found no significant difference in the performance of the students in the program and concluded that implementing the program on a traditional campus may have negatively affected the students' performance due to their identification as alternative students among their peers.

Phillips et al. (1994) reported on a program developed through a partnership of five education providers including the University of Georgia and the Meriweather County School System. The program was a conducted at a magnet site and utilized other school-structure features including: small school size, small class size (7-9 students), applied curriculum, competency-based curriculum, and flexible scheduling. The research design followed the Catterall model by including three groups of students: (a) treatment group, (b) self-identified control group, and (c) randomly selected group of at-risk students. The researchers were unable to construct the randomly selected group for the study. A comparison was made between the treatment group and the self-identified students, finding that the dropout rate for the treatment group was lower at the end of a one-year period.

This research differs from Catterall's in three major areas: The program is (a) a comprehensive, multifaceted design; (b) located away from the traditional high schools on a magnet site; and (c) a longitudinal study, covering the four years considered normal completion time for high school. The study is similar to Catterall's in that it compares a treatment group of at-risk students with two control groups: one self-identified and one randomly selected.

Population and Sampling Procedures

This study examined 96 ninth-grade students in a middle-sized central Florida school district, 30 enrolled in an alternative magnet-site program, and 66 enrolled in the six traditional high schools in the district. The sample for the treatment group of students was comprised of all the ninth-grade students enrolled in the program at the beginning of the 1991-1992 school year. The sample for the first control group was comprised of the 32 1991-1992 ninth-grade students who self-identified by applying for the program, but were not enrolled in the program because they decided not to choose that option or were denied admission due to lack of space. The sample for the second control group was chosen by identifying all 1991-1992 ninth-grade students in the school district who met the eligibility requirements for the program. This search returned 149 students, from which a randomized sample of 34 students was chosen.

Data Collection Procedures

The computerized data base maintained by the school district offering the program was used to generate the data on each student selected for the study. Students enrolled in the program at the beginning of the 1991-1992 school year were identified through enrollment records. Student identification numbers were found for each of these students to enable data collection through the data base. Students were first identified by grade level determined by the number of credits earned at that point in time. Those classified as ninth graders were then entered into the computer system for data collection.

The same process was employed for the self-identified control group. Students were first identified through application and enrollment records to determine which students applied for the program but were not served. Grade level was determined through the use of the data base, and the ninth-grade students were entered for data search.

The data base was queried to identify all of the 1991-1992 students in the school district who met the eligibility criteria for entrance into the program. This search identified 118 students as the population for the second control group. Forty-one students were randomly selected from that population and then entered for data collection.

Historical files for school years 1991-1992, 1992-1993, 1993-1994, and 1994-1995 were searched to identify the number of absences, number of credits earned each year, promotional status, withdrawal, and graduation status for each student in the study. Data were collected for the treatment group and both control groups.

The data collection procedures were approved by the Director of Research and Evaluation of the school district and by the Institutional Review Board at the University of Florida.

Statistical Procedures

Analysis of covariance (ANCOVA) was used to analyze the data and test the null hypotheses. The number of years that students were served by the program was used as the covariate. The statistical hypothesis was tested at the .05 level of significance.

In research question 1, the school attendance of the students in the program was compared to the school attendance of the self-identified students and randomly selected students attending traditional high schools. The second two groups of students were used as control groups. The number of years students were served by the program was used as the covariate. School attendance was used as the outcome variable and the groups (program, self-identified control, and randomly selected control) were the independent variables.

In research question 2, the number of credits earned by the students in the program were compared to the number of credits earned by the two control groups. The outcome variables were the credits earned, and the independent variables were the groups, as described above. The covariate was the number of years students were served by the program.

In research question 3, the grade promotion of students in the program was compared to the grade promotion of the two control groups. The outcome variable was grade promotion, and the independent variables were the three groups in the study. The covariate was the number of years students were served by the program.

In research question 4, the dropout rate of students served by the program was compared to the dropout rate of the two control groups of students. The dropout rate was used as the outcome variable, and the three groups of students were used as the independent variables. The covariate was the number of years students were served by the program.

For research question 5, the graduation rate of students served by the program was compared to the graduation rate of the two control groups. The outcome variable was the graduation rate, and the three groups of students in the study were used as the independent variables. The covariate was the number of years students were served by the program.

CHAPTER 4
RESULTS

The purpose of this study was to determine if placement of unmotivated/unsuccessful ninth-grade students in a magnet-site program improves school attendance, credits earned, grade promotion, dropout rate, and graduation rate. The research focused on a program in one north-Florida school district with an enrollment of 25,000 students. The program was located at a magnet-site campus that served students from across the school district and employed multiple curricular strategies. Students were studied for a four-year period, traditionally the length of time required for high school graduation. The treatment group was compared to two control groups: one self-identified and one randomly selected.

Analyses were run on 96 students: 30 in the treatment program, 32 in the self-identified control group, and 34 in the randomly selected control group. All of the students were ninth-graders in the fall of the 1991-92 school year. Data were collected on attendance, credits earned, promotional status, dropout status, and graduation for the school years 1991-92, 1992-93, 1993-94, and 1994-95. The data source was the school district's computerized data base of student information.

Research Questions

Research questions were posed to investigate the relative school performance of students in the treatment program in comparison with two control groups on five variables. Specifically, this study addressed the following questions:

1. Is there a difference in school attendance of unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

2. Is there a difference in credits earned between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

3. Is there a difference in grade promotion between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

4. Is there a difference in dropout rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

5. Is there a difference in graduation rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

Statistical Methodology

An analysis of covariance (ANCOVA) was run to evaluate the null hypotheses. The covariate was the number of years students took part in the treatment program. The treatment group, self-identified control group, and the randomly selected control group were the independent variables. The dependent variable for Question 1 was the attendance rate of each student on an annual basis. The dependent variable for Question 2 was the number of credits earned during the four-year period. The dependent variable for Question 3 was the number of times each student was promoted to a higher grade level during the four-year period. The dependent variable for Question 4 was the dropout status of each student. The dependent variable for Question 5 was the graduation status of each student. The variables in Questions 4 and 5 were dichotomous variables which were treated as continuous variables in the statistical analysis. The .05 level of significance was selected as the level for rejection of the null hypotheses. The ANCOVA procedures for all five hypotheses were executed with the SAS computer program.

The covariate, length of time in the program, was the same in all five tests. The descriptive statistics are presented in Table 1 in this section to reduce redundancy.

Table 1

Descriptive Statistics for Covariate

Group	N	Mean	Std. Deviation
Program	30	1.21	0.99
Self-ID	32	0	0
Random	34	0	0

Analysis of Hypothesis 1

$H0_1$: There is no significant difference in school attendance of students in the program and similar groups of students in traditional high schools.

An analysis of covariance (ANCOVA) was performed to test the first hypothesis. Absence rate was the dependent variable, group (program vs. two control groups) was the independent variable, and length of time in the program was the covariate. The descriptive statistics for this test are displayed in Table 2.

The ANCOVA procedure type III sums of squares returned an F value of 4.98 and a probability of F of 0.009. Since the probability was less than the selected level of significance of $p \leq 0.05$, there were significant differences among the three groups. The results of the ANCOVA are displayed in Table 3.

Table 2

Descriptive Statistics for School Attendance

Group	N	Mean	Std. Deviation
Program	30	54.80	29.29
Self-ID	32	59.21	47.05
Random	34	36.24	30.22

Table 3

Analysis of Covariance for School Attendance

Source	DF	Sum of Squares	F Value	Pr > F
Model	3	13042.54	3.32	0.023
Error	92	120451.20		
Cor. Total	95	133493.74		
Source	DF	Type III SS	F Value	Pr > F
Group	2	13034.56	4.98	0.009

Pairwise comparisons were made to determine the differences among the groups as described in the null hypothesis. The pairwise comparisons were measured through the least squares means and T values. The comparison of the program group to the self-identified control group returned a T value of 0.17 and a probability of T of 0.867. This comparison was not significant (p >.05). The comparison of the program group to the randomly selected control group returned a T value of -2.07 and a probability of T of 0.041. This comparison was significant (p ≤.05). The statistics for the pairwise comparison are displayed in Table 4.

Table 4

Least Squares Means for School Attendance

Group	LSMean	T Value	Pr > T
Program	58.89	.	.
Self-ID	60.89	0.17	0.867
Random	34.40	-2.07	0.041

There was no significant difference between the program group and the self-identified control group in terms of school attendance. There was a significant difference between the program group and the randomly selected control group in terms of school attendance; however, the desired lower absence rate was achieved by the control group. The null hypothesis therefore was rejected.

Analysis of Hypotheses 2

HO_2: There is no significant difference in credits earned by students in the program and similar groups of students in traditional high schools.

An analysis of covariance (ANCOVA) was performed to test the second hypothesis. The number of credits earned was the dependent variable, group (program vs. two control was the independent variable, and the length of time in the program was the covariate. The descriptive statistics for this test are displayed in Table 5.

Table 5

Descriptive Statistics for Credits Earned

Group	N	Mean	Std. Deviation
Program	30	6.25	7.24
Self-ID	32	7.78	8.88
Random	34	14.27	8.91

The ANCOVA procedure type III sums of squares returned an F value of 11.13 and a probability of F of 0.000. Since the probability was less than the selected level of significance of $p \leq .05$, it can be concluded that there were significant differences among the three groups. The results of the ANCOVA are displayed in Table 6.

Table 6

Analysis of Covariance for Credits Earned

Source	DF	Sum of Squares	F Value	Pr > F
Model	3	1512.93	7.44	0.000
Error	92	6239.28		
Cor. Total	95	7752.21		
Source	DF	Type III SS	F Value	Pr > F
Group	2	1509.52	11.13	0.000

Pairwise comparisons were made to determine the differences among the groups as described in the null hypothesis. The pairwise comparisons were measured through the least square means and T values. The comparison of the program group to the self-identified control group returned a T value of 2.25 and a probability of t of 0.027. The comparison of program group to the randomly selected control group returned a T value of 4.50 and a probability of T of 0.000. Both of these comparisons are significant ($p \leq .05$). The statistics for the pairwise comparisons are displayed in Table 7.

There was a significant difference between the program group and both control groups in terms of credits earned. However, the desired higher number of credits were earned by the control groups. The null hypothesis was rejected.

Table 7

Least Squares Means for Credits Earned

Group	LSMean	T Value	Pr > T
Program	3.44	.	.
Self-ID	9.54	2.25	0.026
Random	15.54	4.50	0.000

Analysis of Hypotheses 3

$H0_3$: There is no significant difference in grade promotion of students in the program and similar groups of students in traditional high schools.

An analysis of covariance (ANCOVA) was performed to test the third hypothesis. The number of times students were promoted during the four-year period was the dependent variable, group (program vs. two control groups) was the independent variable, and length of time in the program was the covariate. The descriptive statistics for this test are displayed in Table 8.

The ANCOVA procedure type III sums of squares returned an F value of 10.35 and a probability of F of 0.000. Since the probability was less than the selected level of significance of $p \leq .05$, there were significant differences

Table 8

Descriptive Statistics for Grade Promotion

Group	N	Mean	Std. Deviation
Program	30	0.73	0.90
Self-ID	32	1.02	1.35
Random	34	1.82	1.31

among the three groups. The results of the ANCOVA are displayed in Table 9.

Table 9

Analysis of Covariance for Grade Promotion

Source	DF	Sum of Squares	F Value	Pr > F
Model	3	29.82	6.90	0.000
Error	92	132.58		
Cor. Total	95	162.40		
Source	DF	Type III SS	F Value	Pr > F
Group	2	29.82	10.35	0.000

Pairwise comparisons were made to determine the differences between the groups as described in the null hypothesis. The pairwise comparisons were measured through the least square means and T values. The comparisons of the program group to the self-identified control group returned a T value of 2.35 and a probability of T of 0.020. This comparison indicated a significant difference since the probability was less than the selected level of significance (t ≤.05). The comparison of the program group to the randomly selected control group returned a T value of 4.40 and a probability of T of 0.000. This comparison indicated a significant difference since the probability was less than the selected level of significance (p ≤.05). The statistics for the pairwise comparisons are displayed in Table 10.

Table 10

Least Squares Means for Grade Promotion

Group	LSMean	T Value	Pr > T
Program	0.30	.	.
Self-ID	1.23	2.35	0.020
Random	2.02	4.40	0.000

There was a significant difference between the program group and self-identified control group in terms of grade promotion. There was also a significant difference between the program group and the randomly selected control group in terms of grade promotion. In both comparisons, the control groups achieved the desired higher promotion rate. The null hypothesis was rejected.

Analysis of Hypotheses 4

HO_4: There is no significant difference in dropout rate of students in the program and similar groups of students in traditional high schools.

An analysis of covariance (ANCOVA) was performed to test the fourth hypothesis. Dropout rate was the dependent variable, group (program vs. two control groups) was the independent variable, and length of time in the program was the covariate. The descriptive statistics for this test are displayed in Table 11.

Table 11

Descriptive Statistics for Dropout Rate

Group	N	Mean	Std. Deviation
Program	30	0.80	0.41
Self-ID	32	0.71	0.46
Random	34	0.53	0.53

The ANCOVA procedure type III sums of squares returned an F value of 3.76 and a probability of F of 0.027. Since the probability was less than the selected level of significance ($p \leq .05$), there were significant differences among the three groups in terms of dropout rate. The results of the ANCOVA are displayed in Table 12.

Table 12

Analysis of Covariance for Dropout Rate

Source	DF	Sum of Squares	F Value	Pr > F
Model	3	1.58	2.55	0.061
Error	92	19.04		
Cor. Total	95	20.63		
Source	DF	Type III SS	F Value	Pr > F
Group	2	1.56	3.76	0.027

Pairwise comparisons were made to determine differences between the groups described in the null hypothesis. The pairwise comparisons were measured through the least square means and T values. The comparison of the program group to the self-identified control group returned a T value of -1.00 and a probability of T of 0.319. This comparison was not significant ($p \geq .05$). The comparison of the program group to the randomly selected control group returned a T value of -2.50 and a probability of T of 0.014. This comparison was significant ($p < .05$). The statistics for the pairwise comparisons are displayed in Table 13.

Table 13

Least Squares Means for Dropout Rate

Group	LSMean	T Value	Pr > T
Program	0.87	.	.
Self-ID	0.72	-1.00	0.319
Random	0.50	-2.50	0.014

There was no significant difference between the program group and the self-identified control group in terms of dropout rate. There was a significant difference between the program group and the randomly selected control group in terms of dropout rate; however, the desired lower dropout rate was achieved by the control group. The null hypothesis therefore was rejected.

Analysis of Hypotheses 5

HO_5: There is no significant difference in the graduation rate of students in the program and similar groups of students in traditional high schools.

An analysis of covariance (ANCOVA) was performed to test the fifth hypothesis. Graduation rate was the dependent variable, group (program vs. two control groups) was the independent variable, and length of time in the program was the covariate. The descriptive statistics for this test are displayed in Table 14.

Table 14

Descriptive Statistics for Graduation Rate

Group	N	Mean	Std. Deviation
Program	30	0.23	0.43
Self-ID	32	0.26	0.45
Random	34	0.15	0.36

The ANCOVA procedure type III sums of squares returned an F value of 1.10 and a probability of F of 0.338. Since the probability was greater than the selected level of significance ($p \leq .05$), there were no significant differences among the three groups in terms of graduation rate. The null hypothesis was not rejected. The results of the ANCOVA are displayed in Table 15.

Table 15

Analysis of Covariance for Graduation Rate

Source	DF	Sum of Squares	F Value	Pr > F
Model	3	0.41	0.78	0.506
Error	92	16.00		
Cor. Total	95	16.41		
Source	DF	Type III SS	F Value	Pr > F
Group	2	0.38	1.10	0.338

Summary

The purpose of this study was to determine if placement of unmotivated/unsuccessful ninth-grade students in a magnet-site program improves school attendance, credits earned, grade promotion, dropout rate, and graduation rate. Significant differences were found in terms of credits earned and promotion between a group of students who took part in the treatment program and both the self-identified and randomly selected control groups. In comparing the program group and randomly selected group on absences and dropout rate, significant differences were found. The null hypotheses for these tests were rejected. In all cases, the performance of the program group was lower than that of the two control groups.

No significant differences were found between the program group and both control groups in terms of graduation rate. The null hypotheses for this test was not rejected.

CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine if placement of unmotivated/unsuccessful ninth-grade students in a magnet-site program improves school attendance, credits earned, grade promotion, dropout rate, and graduation rate. The treatment group, consisting of students in the program, was compared to two control groups: one self-identified and one randomly selected. Data from the district computerized data base files for school years 1991-92, 1992-93, 1993-94, and 1994-95 were used to make the comparisons. The statistical test for the research was the analysis of covariance (ANCOVA). Included in this final chapter are the study's principal findings, conclusions, and recommendations.

Principal Findings

In this study, significant differences were found in school attendance, credits earned, grade promotion, and dropout rate when comparing the program group to the randomly selected control group. Therefore, investigation into the following five research questions resulted in positive responses to Questions 1, 2, 3, and 4 for comparisons to the randomly selected control group:

1. Is there a difference in school attendance of unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

2. Is there a difference in credits earned between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

3. Is there a difference in grade promotion between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

4. Is there a difference in dropout rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

5. Is there a difference in graduation rate between unmotivated/unsuccessful ninth-grade students in a magnet-site program and similar groups of unmotivated/unsuccessful ninth-grade students in traditional high schools?

Significant differences also were found in credits earned and grade promotion when the program group was compared to the self-identified control group. Therefore, the investigation resulted in positive responses to Questions 2 and 3 for comparisons to the self-identified control group. In all significant comparisons, students in the control groups performed at a higher level than students enrolled in the program. The first four null hypotheses were rejected:

$H0_1$: There is no significant difference in school attendance of students in the program and similar groups of students in traditional high schools.

$H0_2$: There is no significant difference in credits earned by students in the program and similar groups of students in traditional high schools.

$H0_3$: There is no significant difference in grade promotion of students in the program and similar groups of students in traditional high schools.

$H0_4$: There is no significant difference in dropout rate of students in the program and similar groups of students in traditional high schools.

No significant differences were found in school attendance, dropout rate, or graduation rate between the program group and the self-identified control group, nor in graduation rate between the program group and the randomly selected control group. The fifth null hypothesis was not rejected:

HO_5: There is no significant difference in the graduation rate of students in the program and similar groups of students in traditional high schools.

The findings of this study evidenced that ninth-grade students taking part in the magnet-site program did not improve performance in school on any of the five factors measured. This performance was significantly lower on four of the factors: school attendance, credits earned, grade promotion, and dropout rate.

Conclusions

American businesses and industries have changed in structure and operation to a more technical system of producing goods and services. These changes require a more highly skilled worker. Unskilled jobs, which represented 65% of the workforce in 1950, are predicted to shrink to 15% by the year 2000 (Brustein & Mahler, 1994). Skills required for most new jobs will require high school graduation and further training (Morris, 1992).

The high school dropout rate declined steadily throughout this century until 1970 (Morris, 1994). The increasing number of high school graduates provided the more highly skilled workforce required by economic institutions until that date. As the dropout rate leveled, creating a mismatch between new workers' skills and the skills required for jobs, public concern about the dropout rate was voiced.

States began alternative education programs and strategies targeting students at risk of dropping out of school. In Florida, the state began providing additional funding for students in dropout prevention programs. This move was to increase resources and encourage school districts to offer alternative strategies. While there is a consensus that alternative strategies must be employed to better serve at-risk students, there is little research to identify successful alternative programs and strategies.

This study adds to the research base on alternative education programs, but did not find increased student achievement. In fact, students in the program performed at a lower level on four of the outcomes measured: school attendance, credits earned, grade promotion, and dropout rate. It must be noted that the study focused on only one cohort of students, the 1991-92 ninth grade class. Eleven classes have enrolled in the program, creating the possibility that the studied group was not typical of all students served by this program. Further research is indicated to determine whether the group of students selected for this study are representative of all students who have enrolled in the program.

It could also be argued that the curriculum in the magnet-site alternative education program provided students with skills making them more successful after leaving school even though they may have dropped out prior to graduation. Study of students' employability, job placement, and wages may give a more accurate view of their ability to participate in society than relying on school-based measures.

Recommendations

Informal discussions with both students and teachers participating in the alternative program indicated that students gained an improved attitude toward school and improved performance in school. The data and statistics generated through this study do not support the teachers and students contentions and even suggest that the opposite may be true. The divergent anecdotal evidence and research data suggest that further study is needed to determine the success of this program.

Only one cohort of students, the 1991-92 ninth grade class, was included in this longitudinal study. It was understood that there was a possibility that the performance of students in this class was not typical of all students enrolled in the program. To determine whether this cohort was representative of the performance of students served by the program, the statistics should be expanded to include other cohorts adding to the evaluation data.

In discussions with teachers in this alterative program, they disagreed with the suggestions in the literature to focus study on ninth-grade students. Their experience indicated that students who entered the magnet-site program directly from middle schools had not yet experienced failure in a traditional high school setting. These students may have an inaccurate perception of high school curriculum, instruction, and level of rigor. They often perform poorly in the program, believing that it would be easier to succeed in a traditional high school. The teachers' view suggested further study on groups of students first entering the program after attending a traditional high school.

The literature suggested that alternative strategies should be employed as early as possible to improve at-risk students' performance in school (Roderick, 1993). While most students drop out of school in the ninth grade (Sanchez, 1994), this may be too late in their school career to intervene. Further study of programs for ninth-grade students are recommended in this study and may suggest targeting strategies at earlier grade levels.

Studies of student performance in alternative education programs focus on school performance when, in fact, the true goal of these programs are to prepare students to perform in society after leaving school. Studies evaluating factors such as employability skills, job placement, job performance, and wages may give a truer picture of student and program success.

American schools are required to prepare students with high-level skills for an increasingly technical and complex society. High school graduation will continue to be a required step in the educational process for students to obtain the additional education needed for jobs that pay a living wage. Research on alternative strategies to increase the school performance and graduation rate of at-risk students must be expanded to identify successful educational practices for these students.

REFERENCES

Agan, J. L. (1991). An analysis of school-related dropout factors as reported by Georgia General Education Development students (Doctoral dissertation, Auburn University, 1989). Dissertation Abstracts International, 51, 3598A.

Ascher, C. (1987). The ninth grade--a precarious time for the potential dropout. (Eric Digest No. 34). New York: ERIC Clearinghouse on Urban Education.

Association for Supervision and Curriculum Development. (1996). ASCD issues--1996. Alexandria, VA: Author.

Austin Independent School District. (1987). Caution: Hazardous grade. Ninth graders at risk. Austin, TX: Author, Office of Research and Evaluation.

Bachman, J. G. (1972). Dropouts are losers says who? Today's Education, 61(4), 27-31.

Bachman, J., Green, S., & Wirtanen, I. (1972). Dropping out is a symptom. The Educational Digest, 37(8), 1-5.

Baker, J. & Sansone, J. (1990). Interventions with students at risk for dropping out of school: A high school responds. The Journal of Educational Research, 83(4), 181-186.

Barro, S. M. & Kolstand, A. (1987). Who drops out of high school? Findings from high school and beyond. Washington, DC: Center for Educational Statistics.

Blank, R. K. (1984). The effects of magnet schools on the quality of education in urban school districts. Phi Delta Kappan, 66, 270-272.

Blinde, P. L., & Chan, K. S. (1984). Dropping out amoung language minority youth. Review of Educational Research, 54(1), 113-132.

Block-Pedego, A. E. (1991). Early identification and prediction of students at-risk for dropping out of school using the School Archival Records Search (SARS) (Doctoral dissertation, University of Oregon, 1990). Dissertation Abstracts International, 51, 3627A.

Braddock, J. H. (1981). The issue is still equality of educational opportunity. Harvard Educational Review, 51, 490-496.

Brodinsky, B. & Keough, K. E. (1989). Students at risk: Problems and solutions. Arlington, VA: American Association of School Administrators.

Brooke, R. G. (1989). Alternative education dropout prevention programs: Case studies of six suburban programs (Doctoral dissertation, Fordham University, 1988). Dissertation Abstracts International, 50, 1265A-1266A.

Brustein, M. & Mahler, M. (1994). AVA guide to the school-to-work opportunities act. Alexandria, VA: American Vocational Association.

Bryk, A. S., & Thum, Y. M. (1989). The effects of high school organization on dropping out: An exploratory investigation. American Education Research Journal, 26, 353-383.

Burkham, D. T., & Lee, V. E. (1990, April). Changing high school--an alternative to dropping out. Paper presented at the Annual Meeting of the American Research Association, Boston, MA.

Butchard, R. E. (1986). Dropout prevention through alternative high schools: A study of the national experience. Elmira, NY: Elmira Board of Cooperative Education Services.

Casey, A. C. & McSwain, J. A. (1989). Cooperative alternative program: A plan for dropout prevention. Report on the CAP program. Coleman, TX.

Casey, E. (1990). Attendance +Plus. Report of the superintendent of Faben Independent School District. Faben, TX.

Castor, B. (1991, August). Keynote address. Paper presented at the 24th Annual Florida Vocational, Adult, and Community Education Conference, Tampa, FL.

Catterall, J. S. (1986). School dropouts: Policy prospects. policy issues. Charleston, WV: Appalachian Educational Laboratory.

Catterall, J. S. (1987a). On the social costs of dropping out of school. The High School Journal, 71, (1), 19-31.

Catterall, J. S. (1987b). An intensive group counseling dropout prevention intervention: Some cautions on isolating at-risk adolescents within high schools. American Education Research Journal, 24, 521-540.

Catterall, J. S., & Stern, D. (1986). The effects of alternative school program on high school completion and labor market outcomes. Educational Evaluation and Policy Analysis, 8, 77-86.

Coleman, J., & Hoffer, T. (1987). Public and private high schools: The impact of communities. New York: Basic Books.

Cope, G. E. (1989). A report about the design, implementation, and evaluation of a dropout retrieval and prevention program (Doctoral dissertation, The Union for Experimenting Colleges and Universities, 1988). Dissertation Abstracts International, 50, 836A.

Cuban, L. (1989). At-risk students: What teachers and principals can do. Educational Leadership, 46, (5), 29-33.

Cullen, C. L. (1991). Middle college high school: Its organization and effectiveness (Doctorial dissertation, Columbia University Teachers College, 1991). Dissertation Abstracts International, 52, 358A.

Dewey, J. (1916). Democracy and education. New York: The Macmillan Company.

Dougherty, V. (1989). Youth at risk: The need for information. In J. M. Lakebrink (Ed.), Children at risk (pp. 3-17). Springfield, IL: Charles C. Thomas.

Downing, J. & Harrison, T. C. (1990). Dropout prevention: A practical approach. The School Counselor, 38(1), 67-74.

Doyle, D. P., & Levine, M. (1984). Magnet schools: Choice and quality in public education. Phi Delta Kappan, 66, 265-270.

Druian, G. (1986). Effecting schooling and at-risk youth: What the research shows. Portland, OR: Northwest Regional Educational Laboratory.

Duchenfield, M., Hamby, J. V., & Smink, J. (1990). Effective strategies for dropout prevention: Twelve successful strategies to consider in a comprehensive dropout prevention program. Clemson, SC: National Dropout Prevention Center.

Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings from a national study. Teachers College Record, 87, 355-373.

Eubanks, A. M. G. (1995). The personal experiences of ten middle school dropouts (Doctoral dissertation, University of Massachusetts, 1994). Dissertation Abstracts International, 55, 2271-A.

Fine, M. (1994). Chart[er]ing urban school reform. In R. J. Rossi (Ed.), School and students at-risk: Context and framework for positive change (pp. 163-181). New York: Teachers College, Columbia University.

Fine, M., & Zane, N. (1989). Bein' wrapped too tight: When low-income women drop out of high school. In L. Weis, E. Farrar, & H. E. Petrie (Eds.), Dropouts from school: Issues, dilemmas, and solutions (pp. 23-53). Albany, NY: State University of New York Press.

Finn, J. D. (1991). How to make the dropout problem go away. Educational Researcher, 20(1), 28-30.

Florida Department of Education. (1987). Dropouts and related issues. Tallahassee, FL: Author, Bureau of Public Schools.

Florida Department of Education. (1988). Dropout prevention: Partnerships and programs. Tallahassee, FL: Author, Bureau of Career Development.

Florida State Board of Education. (1991). Administrative Rules. Tallahassee, FL: Author.

Frazer, L. & Wilkinson, D. (1990, April). At-risk students: Do we know which ones will drop out? Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

Furth, M. J. (1989). Foreward. In J. M. Lakebrink (Ed.), Children at risk (pp. xi-xii). Springfield, IL: Charles C. Thomas.

Ganim, M. (1991). The prediction of dropouts, graduates, nongraduates and at-risk students across gender, ethnicity, SES, language, academic performance, and school size (Doctorial dissertation, Woman's University, 1990). Dissertation Abstracts International, 52, 471A.

General Accounting Office. (1986). School dropouts. The extent and nature of the problem. Washington, DC: Author, Division of Human Resources.

George, J. D., Land, A. J., & Hickson, J. (1992). The school dropout problems. Guidance & Counseling, 8(2) 36-44.

Gerics, J. & Westheimer, M. (1986). Dropout prevention: Trinkets and gimmicks or Dewyan reconstruction? Teachers College Record, 90, 41-60.

Glasser, W. (1969). Schools without failure. New York: Harper & Row Publishers.

Goodlad, J. I. (1984). A place called school: Prospects for the future. New York: McGraw-Hill Book Company.

Greene, B. Z. (1986). Lowering the risk for "at risk" students. Updating School Board Policies, 17(8), 1-3.

Grossnickle, D. R. (1986). High school dropouts: Causes, consequences, and cure. (Fastback 242). Bloomington, IN: Phi Delta Kappa Educational Foundation.

Guthrie, L. F. (1989). What schools can do for students at risk. San Fransisco, CA: Far West Laboratory for Educational Research and Improvement.

Hahn, A., Danzberger, J. & Lefkowitz, B. (1987). Dropouts in America: Enough is known for action. Washington, DC: Institute for Educational Leadership.

Hamby, J. V. (1989). How to get an "A" on your dropout prevention report card. Educational Leadership, 46(4), 21-28.

Hamilton, S. F. (1986). Raising standards and reducing dropout rates. Teachers College Record, 87, 411-429.

Hammach, F. M. (1986). Large school systems' dropout reports: An analysis of definition, procedures, and findings. Teachers College Record, 87, 324-341.

Harris, I., Hedman, C., & Horning, M. (1983). Success with high school dropouts. Educational Leadership, 40(6), 35-36.

Hess, G. A. & Greer, J. L. (1987). Educational triage and dropout rates. In W. T. Denton (Ed.), Dropouts, pushouts, and other casualties (pp. 115-152). Bloomington, IN: Phi Delta Kappa.

Hodgkinson, H. L. (1985). All one system: Demographics of education, kindergarten through graduate school. Washington, DC: Institute for Educational Leadership.

Hodgkinson, H. L. (1988). Florida: The state and its education system. Washington, DC: Institute for Educational Leadership.

Hodgkinson, H. L. (1991). Reform versus reality. Phi Delta Kappan, 73(1), 9-16.

Holtzman, E. (1993). Half the battle: The high school dropout rate is down, but the graduation rate is not rising. New York: City of New York, Office of the Comptroller, Office of Policy Management.

Howe, H. (1984). Giving equality a chance in the excellence game. NASSP Bulletin, 68(473), 75-90.

Hull, D. (1995). Who are you calling stupid? Waco, TX: CORD Communications.

Hull, D. & Parnell, D. (1991). Tech prep associate degree: A win/win experience. Waco, TX: Center of Occupational Research and Design.

Institute for Educational Leadership. (1986). School dropouts: Everyone's problem. Washington, DC: Author.

Jackson, D. N. (1994). Moving from reactive to proactive planning for students at-risk. In R. C. Morris (Ed.), Using what we know about at-risk youth: Lessons from the field (pp. 231-253). Lancaster, PA: Technomic Publishing Company, Inc.

Jenifer, S. J. (1995). Effectiveness of high school dropout prevention strategies in reducing absenteeism (Doctoral dissertation, Wayne State University, 1995). Dissertation Abstracts International, 56, 1601A.

Jenifer, W. A. (1990). Predictive characteristics of high school dropouts (Doctoral Dissertation, Wayne State University, 1989). Dissertation Abstracts International, 50, 1871A.

Jensen, L. C. & Strauser, E. B. (1994). The utilization of apprenticeship experience in alternative education: A personalized approach to dropout prevention. In R. C. Morris (Ed.), Using what we know about at-risk youth: Lessons from the field (pp. 173-179). Lancaster, PA: Technomic Publishing Company, Inc.

Koeninger, J. G. (1995). A model for serving at-risk students. In Naomi Thiers (Ed.), Building a school-to-careers system (pp. 227-236). Alexandria, VA: American Vocational Association.

Lakebrink, J. M. (Ed.). (1989). Children at risk. Springfield, IL: Charles C. Thomas.

Lane, J. J. (1989). Principal perception of the at-risk child. In J. M. Lakebrink (Ed.), Children at risk (pp. 45-56). Springfield, IL: Charles C. Thomas.

Lee, V. E., & Bryk, A. S. (1988). Curriculum tracking as mediating social distribution of high school achievement. Sociology of Education, 61, 78-94.

Left, J. M. (1994). Retention and dropouts: An administrative investigation (Doctoral dissertaion, University of Alabama, Birmingham). Dissertation Abstracts International, 56(2), 417A-418A.

Lewis, A. C. (1996). Washington commentary. Phi Delta Kappan, 77(7), 460.

Lizon, G., Olson, G. H., Frazer, L., Garcia, S., & Cole, J. (1990, January). Diploma or dropout statistics: Alternatives for at-risk students. A symposium presented at the annual meeting of the Southwest Educational Research Association, Austin, TX.

Mann, D. (1986). Can we help dropouts: Thinking about the undoable. Teachers College Record, 87, 307-323.

Martula, J. (1987). The effectiveness of a junior high dropout prevention program (Doctoral dissertation, University of Miami, 1986). Dissertation Abstracts International, 47, 4047A.

McCaul, E. (1989). Approaches to dropout prevention: The philosopher's stone revisited. Research in Rural Education, 6(2), 25-30.

McDill, E. L., & Legters, N. (1994). Rising to the challenge. In R. J. Rossi (Ed.), Schools and students at-risk: Context and framework for positive change (pp. 23-47). New York: Teachers College, Columbia University.

McDill, E. L., Natriello, G., & Pallas, A. M. (1986). A population at risk: Potential consequences of tougher school standards for student dropouts. American Journal of Education, 94, 135-181.

McLaughlin, M. J. (1990). High school dropouts: How much of a crisis? (Backgrounder, no. 781). Washington, DC: Heritage Foundation.

McMillen, M. M., Kaufman, P., & Whitener, S. D. (1994). Dropout rates in the United States: 1993. Washington, DC: National Center for Educational Statistics.

McPartland, J. M. (1994). Dropout prevention in theory and practice. In R. J. Rossi (Ed.), Schools and students at-risk: Context and framework for positive change (pp. 255-276). New York: Teachers College, Columbia University.

Metz, M. H. (1986). The context and character of three magnet schools. New York & London: Routledge and Kegan Paul, Ltd.

Mirochnik, D., & McCaul, E. J. (1990). Public school dropouts: A contextual approach (Occasional paper series: No. 5). Orono, ME: University of Maine, College of Education, & Penquis Superintendents' Association Research Cooperative.

Morris, R. C. (Ed.). (1992). Solving the problems of youth at-risk: Involving parents and community resources. Lancaster, PA: Technomic Publishing Company.

Morris, R. C. (Ed.). (1994). Using what we know about at-risk youth: Lessons from the field. Lancaster, PA: Technomic Publishing Company.

Morrow, G. (1986). Standardizing practice in the analysis of school dropouts. Teachers College Record, 87, 342-355.

Motsinger, H. (1993). Recipe for success: Factor chart helps students to succeed. NASSP Bulletin, 77(554), 6-15.

Murray, C. & Laren, D. (1986). According to age: Longitudinal profiles of AFDC recipients and the poor by age group. Prepared for the working seminar of the family and American welfare policy. Washington, DC: American Enterprise Institute for Public Policy Research.

Newmann, F. M. (1989). Reducing student alienation in high schools: Implications of theory. In L. Weis, E. Farrar, & H. E. Petrie (Eds.), Dropouts from school: Issues, dilemmas, and solutions (pp. 153-177). Albany, NY: State University of New York Press.

O'Connor, P. (1985). Dropout prevention programs that work. Eugene, OR: Oregon School Study Council.

Ogletree, E. J. (1990). Alternative schools and dropout rate. Chicago: Chicago State University, Department of Curriculum and Instruction.

Ohio Department of Education (n.d.). Reducing dropouts in Ohio schools: Guidelines and promising practices. Columbus, OH: Author, Division of Educational Services.

Olga, R. (1989). Evaluation of TEAM '91: A high school dropout prevention program (Doctoral dissertation, DePaul University). Dissertation Abstracts International, 50, 2435A.

Opuni, A. K., Goebel, S. D., & Sanchez, K. S. (1990). The strive program: A special "pull-out" instructional program for at-risk ninth grade students. Washington, DC: U. S. Environmental Protection Agency, Youth Programs.

Pallas, A. M. (1986). School dropouts in the United States. In Stern, J. D. & Williams, M. F.(Eds.), The condition of education (pp. 158-174). Washington, DC: Center for Educational Statistics.

Pallas, A. M. (1987). School dropouts in the United States. Washington, DC: Center for Educational Statistics.

Parrish, L. H. (1991). Community resources and dropout prevention. In L. L. West (Ed.), Effective strategies for dropout prevention (pp. 217-232). Gaithersburg, MD: Aspen Publishing.

Payne, C. (1989). Urban teachers and dropout-prone students: The uneasy partners. In L. Weis, E. Farrar, & H. E. Petrie (Eds.), Dropouts from school: Issues, dilemmas, and solutions (pp. 113-127). Albany, NY: State University of New York Press.

Peng, S. S. (1985). High school dropouts: A national concern. Washington, DC: National Center for Educational Statistics.

Phillips, V., Howard, L., McKinley, C., & Bowden, M. (1994). Off-campus opportunities program: Collaboration at work. In R. C. Morris (Ed.), Using what we know about at-risk youth: Lessons from the field (pp. 173-179). Lancaster, PA: Technomic Publishing Company, Inc.

Ramirez, A. (1990). These are the hallmarks of effective dropout programs. The Executive Educator, 12(4), 23-25.

Ramsey, J. H. (1989). A descriptive study profiling dropouts from a large suburban district in Texas (Doctoral dissertation, East Texas State University, 1988). Dissertation Abstracts International, 50, 364A.

Raywid, M. A. (1979). In praise of the Hawthorne Effect. Journal of Teacher Education, 30(3), 64.

Raywid, M. A. (1982). The current status of schools of choice in public secondary education. Hempstead, NY: Hofstra University.

Raywid, M. A. (1987). Reflections on understanding, studying, and managing magnet schools. Washington, DC: Office of Education and Improvement.

Reyes, P. (1989). Factors that effect the commitment of children to stay in school. In J. M. Lakebrink (Ed.), Children at risk (pp. 18-31). Springfield, IL: Charles C. Thomas.

Robbins, J., Mills, S., & Clark, W. (1981). Alternative programs: Sometimes they work, sometimes they don't. NASSP Bulletin, 65(445), 48-56.

Robledo, M. d. R. (1986). School dropout survey project: A summary of findings, Intercultural Development Research Association. San Antonio, TX: Texas State Department of Community Affairs.

Roderick, M. R. (1993). The path of dropping out: Evidence for intervention. Westport, CT: Auburn House.

Rossell, C. H. (1989). Magnet schools as a desegregation tool: The importance of contextual factors in explaining their success. Urban Education, 14, 303-320.

Rossell, C. H. (1990). The carrot and the stick for school desegregation policy: Magnet schools or forced bussing. Philadelphia: Temple University Press.

Rowland, R. & Snow, E. (1994). Positive effects of a demonstration program for high school students at risk of dropping out of school. In R. C. Morris (Ed.), Using what we know about at-risk youth: Lessons from the field (pp. 159-171). Lancaster, PA: Technomic Publishing Company.

Rumberger, R. W. (1986). High school dropouts: A problem for research, policy, and practice. California Public Forum, 1, 1-19.

Rumberger, R. W. (1987). High school dropouts: A review of issues and evidence. Review of Educational Research, 57, 101-121.

Sanchez, M. (1994). Dropout report 1992-93. Austin, TX: Austin Independent School District.

Sarkees-Wircenski, M. D. (1991). The school at-risk team. In L. L. West (Ed.), Effective strategies for dropout prevention of at-risk youth (pp. 191-216). Gaithersburg, MD: Aspen Publishers.

Schulz, E. M., Toles, R., & Rice, W. K. (1986). The association of dropout rates with student attributes. In W. T. Denton (Ed.), Dropouts, pushouts, and other casualties (pp. 89-104). Bloomington, IN: Phi Delta Kappa.

Shippee, J. (1992). Creating win-win situations in parent, community, and teacher involvement with at-risk young people: A new use for Maslow's hierarchy of needs. In R. C. Morris (Ed.), Solving the problems of youth at-risk: Involving parents and community resources (pp. 94-100). Lancaster, PA: Technomic Publishing Company, Inc.

Sinclair, R. L. & Ghory, W. J. (1987). Reaching for marginal students: A primary concern for school renewal. The National Society for the Study of Education. Chicago: McCutchan Publishing Corporation.

Sizer, T. R. (1984). Horace's compromise: The dilemma of the American high school. Boston: Houghton Mifflin Co.

Sklarz, D. P. (1989, September). Keep at-risk students in school by keeping them up to grade level. The American School Board Journal, pp. 33-34.

Smith, G. A. (1991). Program planning for at-risk students. In L. L. West (Ed.), Effective strategies for dropout prevention of at-risk youth (pp. 43-73). Gaithersburg, MD: Aspen Publishers.

Stern, D., Dayton, C., Paik, I., Weisberg, A., & Evans, J. (1988). Combining academic and vocational courses in an integrated program to reduce high school dropout rates: The second-year results for replications of the California Peninsula Academies. Educational Evaluation and Policy Analysis, 10, 161-170.

Sween, J. A. (1989). The timing of dropping out, the possibility of early identification, and the need for intervention before high school. In J. M. Lakebrink (Ed.), Children at risk (pp. 32-44). Springfield, IL: Charles C. Thomas.

Texas Education Agency (1995). Public school dropouts. 1992-93 report. Austin, TX: Author.

Thurow, L. C. (1992). Head to head: The coming economic battle among Japan, Europe and America. New York: William Morrow and Company, Inc.

Tinto, T. (1987). Leaving college: Rethinking the causes and cures of student attrition. Chicago: University of Chicago Press.

Titone, J. S. (1982). Educational strategies for preventing students from dropping out of high school. Palo Alta, CA: R & E Research Associates.

Troob, C. (1985). Longitudinal study of students entering high school in 1979: The relationship between first term performance and school completion. Brooklyn, NY: New York City Board of Education.

Tyack, D. B. (1974). The one best system. Cambridge, MA: Harvard University Press.

Tyler, R. W. (1983). A place called school. Phi Delta Kappan, 64, 462-464.

Tyler, R. W. (1987). Foreward. In R. L. Sinclair & W. J. Ghory, Reaching marginal students: A primary concern for school renewal (pp. vii-xviii). The National Society for the Study of Education. Chicago: McCutchan Publishing Corporation.

Underwood, J. (1989). Legal protections for at-risk children. In J. M. Lakebrink (Ed.), Children at risk (pp. 90-118). Springfield, IL: Charles C. Thomas.

U. S. General Accounting Office. (1986). School dropouts, the extent and nature of the problem. Report to Congressional Requestors. Washington, DC: Author.

Van Denburg, J. K. (1911). Causes of the elimination of students in public secondary schools of New York City. New York: Teachers College, Columbia University.

Vanfossen, B., Jones, J. D., & Spade, J. Z. (1987). Curriculum tracking and status maintenance. Sociology of Education, 60, 104-122.

Walker, D. M. (1991). At-risk factors influencing the freshman dropout rate at Thomas A. Edison High School in the San Antonio Independent School District (Doctoral dissertation, Texas A&M University, 1991). Dissertation Abstracts International, 52, 386A-387A.

Washington, W. C. (1994). Linking schools and employment: Achieving success for all students. In R. C. Morris (Ed.), Using what we know about at-risk youth: Lessons from the field (pp. 213-221). Lancaster, PA: Technomic Publishing Company.

Weber, J. M., & Sechler, J. A. (1987). Characteristics of exemplary vocational education programs designed to prevent at-risk youth from dropping out. Educational Leadership, 44(6), 72.

Wehlage, G. G. (1983). Effective programs for the marginal high school student. (Fastback 197). Bloomington, IN: Phi Delta Kappa Educational Foundation.

Wehlage, G. G. (1987). At-risk students and the need for high school reform, In W. T. Denton (Ed.), Dropouts, pushouts, and other casualties (pp. 211-221). Bloomington, IN: Phi Delta Kappa.

Wehlage, G. G. (1989a). Engagement, not remediation or higher standards. In J. M. Lakebrink (Ed.), Children at risk (pp. 57-73). Springfield, IL: Charles C. Thomas.

Wehlage, G. G. (1989b). Dropping out: Can schools be expected to prevent it? In L. Weis, E. Farrar, & H. E. Petrie (Eds.), Dropouts from school: Issues, dilemmas, and solutions (pp. 1-19). Albany, NY: State University of New York Press.

Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? Teachers College Record, 87, 374-392.

Wehlage, G. G., Rutter, R. A., & Turnbaugh, A. (1987a). A program model for at-risk high school students. Educational Leadership, 44(6), 70-73.

Wehlage, G. G., Rutter, R. A., & Turnbaugh, A. (1987b). Evaluation of a model program for at-risk students. In W. T. Denton (Ed.), Dropouts, pushouts, and other casualties (pp. 159-207). Bloomington, IN: Phi Delta Kappa.

Weis, L., Farrar, E., & Petrie, H. G. (Eds.). (1989). Dropouts from school: Issues, dilemmas, and solutions. Albany, NY: State University of New York Press.

Wheeler, M. (1990). A study of the effectiveness of a dropout prevention program for at-risk seventh grade students (Doctoral dissertation, Northern Arizona University, 1989). Dissertation Abstracts International, 50, 2345A.

Wheelock, A. (1986). Dropping out: What the research says. Equity and Choice, 3(1), 7-11.

Wircenski, J. L. (1991). Strategies for droppout prevention. In L. L. West (Ed.), Effective strategies for dropout prevention of at-risk youth (pp. 175-189). Gaithersburg, MD: Aspen Publishers.

Wittlebols, J. H., & Triplett, S. E. (1986). Collecting national dropout statistics. Washington, DC: Council of Chief State School Officers.

Wylie, V. C. & Hunter, W. A. (1994). The dropout problem: Can schools meet the challenge? NASSP Bulletin, 78(565), 74-80.

Ziegler, C. W. (1928). School attendance as a factor in school progress. New York: Bureau of Publications, Teachers College, Columbia University.

BIOGRAPHICAL SKETCH

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Mr. Moore taught five years for the Hillsborough County Public Schools at the high school and adult levels. For eight years he served the Florida Department of Education as an educational consultant and program specialist for the Division of Vocational Education at the regional office in Gainesville, Florida. In 1985, he became the Supervisor of Vocational Education for the School Board of Alachua County. Presently, Mr. Moore is the Director of Tech Prep/School-To-Work at St. Johns River Community College, leading a consortium comprised of Clay, Putnam, and St. Johns District Schools, St. Augustine Technical Center, and the college.

Mr. Moore is active in many professional and civic organizations, currently serving as president of the Florida Tech Prep Association, vice president of the Florida Vocational Association, and scholarship chair of the Alachua

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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